

2:15-cv-01045-RFB-PAL

1 UNITED STATES DISTRICT COURT

2 DISTRICT OF NEVADA

3
4 CUNG LE, et al.,)
5 Plaintiffs,) Case No. 2:15-cv-01045-RFB-PAL
6 vs.)
7 ZUFFA, LLC, d/b/a Ultimate) Las Vegas, Nevada
8 Fighting Championship and) Monday, August 26, 2019
UFC,) 9:43 a.m.
9 Defendants.) EVIDENTIARY HEARING, DAY ONE

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REPORTER'S TRANSCRIPT OF PROCEEDINGS

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THE HONORABLE RICHARD F. BOULWARE, II,
UNITED STATES DISTRICT JUDGE

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APPEARANCES: See Pages 2 and 3

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COURT REPORTER: Patricia L. Ganci, RMR, CRR
United States District Court
333 Las Vegas Boulevard South, Room 1334
Las Vegas, Nevada 89101

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16 LAS VEGAS, NEVADA; MONDAY, AUGUST 26, 2019; 9:43 A.M.

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18 P R O C E E D I N G S

19 THE COURT: Please be seated.

20 COURTROOM ADMINISTRATOR: Now calling Cung Le, et al,
21 versus Zuffa, LLC, Case Number 2:15-cv-01045-RFB-BNW. This is
22 the time for the evidentiary hearing, Day 1.

23 Starting with counsel for plaintiff, please note your
24 appearance for the record.

25 MR. CRAMER: Good morning, Your Honor. Eric Cramer for

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1 the plaintiffs. And I'd also like to introduce Your Honor again
2 to two of the named plaintiffs who are here, Kyle Kingsbury and
3 Jon Fitch.

4 THE COURT: Good morning.

5 MR. DAVIS: Good morning, Your Honor. Josh Davis for
6 the plaintiffs.

7 MR. SAVERI: Good morning, Your Honor. Joseph Saveri
8 on behalf of the plaintiffs.

9 MR. SUTER: Good morning, Your Honor. Mark Suter on
10 behalf of plaintiffs.

11 MR. MADDEN: Good morning, Your Honor. Patrick Madden
12 on behalf of plaintiffs.

13 MR. SILVERMAN: Good morning, Your Honor. Dan
14 Silverman.

15 MR. SPRINGMEYER: Good morning, Your Honor. Don
16 Springmeyer on behalf of the plaintiffs.

17 THE COURT: Good morning.

18 MR. ISAACSON: Good morning, Your Honor. Bill Isaacson
19 for Zuffa.

20 MS. GRIGSBY: Good morning, Your Honor. Stacey Grigsby
21 on behalf of Zuffa.

22 MR. WIDNELL: Good morning, Your Honor. Nicholas
23 Widnell on behalf of Zuffa.

24 MR. MCKNIGHT: Good morning, Your Honor. Riche
25 McKnight on behalf of Zuffa.

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1 MR. MIRKOVICH: Good morning, Your Honor. Samuel
2 Mirkovich, Campbell and Williams, on behalf of Zuffa.

3 THE COURT: And do we have anyone on the telephone?

4 MR. KELLY: Your Honor, good morning. Phil Kelly on
5 behalf of Bellator Sport Worldwide, nonparty, but a motion
6 pending related to us today.

7 THE COURT: Oh, so you want to appear on the motion as
8 it relates to the documents and sealings. Is that what you're
9 here for, Mr. Kelly?

10 MR. KELLY: That's correct, Your Honor.

11 THE COURT: So I'll grant your admission to appear as
12 relates to that.

13 And I believe we have one other individual, Mr. --

14 MS. GRIFFITH: Oh, Your Honor, Blakely Griffith, local
15 counsel for Bellator Sport, here with Mr. Kelly.

16 THE COURT: Okay.

17 COURTROOM ADMINISTRATOR: Hello, Counsel. This is
18 Blanca Lenzi, courtroom administrator. We are currently in the
19 hearing. If you can announce your presence for the Court.

20 MS. JENKINS: Good morning. Brooke Jenkins and David
21 Marroso from, on behalf of Top Rank.

22 THE COURT: Good morning.

23 So the first thing I want to do is deal with the issue
24 of the sealing and unsealing of documents in this case. First,
25 it seems to me that the case involves a matter that would be

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1 dispositive on the issue or dispositive on the case. I can't
2 see the case proceeding if I don't grant the motion to certify.
3 Therefore, it does seem the compelling reasons standard would be
4 appropriate in this context.

5 So I'm not sure which of the counsel would like to
6 proceed, Mr. Isaacson or Ms. -- I'm sorry, is it Grigsby? I
7 want to pronounce it right -- Grigsby.

8 I think you argued this last time to me.

9 MS. GRIGSBY: Yes, Your Honor.

10 THE COURT: I don't know if you have anything else to
11 add, but it would be my intention to completely unseal both
12 Dr. Singer and Dr. Topel's report and all of the underlying
13 information. I don't know how I could write a decision as it
14 relates to the class certification that did not involve a
15 discussion of this matter in this case. And it seems to me it
16 would be appropriate to do that, and I think that there are
17 compelling reasons as it relates to the information in there.

18 But there certainly is information I think that may --
19 and I haven't gone through all of the appendices as relates to
20 the individual fighters' information I think should be redacted,
21 and I don't think there's any disagreement about that. But as
22 it relates to the revenue information, as it relates to other
23 information, it does seem to me that that is information that is
24 not protected in the context here. It's information that's
25 directly relevant to the public inquiry here. It's information,

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1 from my review, that wouldn't cause any competitive harm as it
2 relates to the entities.

3 And I'll hear from the other third parties about what
4 they may want to potentially have excluded. But part of the
5 issue in this case is it's undisputed, it seems to me, that
6 Zuffa exercised or UFC exercised the dominant market share.
7 It's hard for me to understand how there would be any harm to
8 these entities as relates to the information that is going to be
9 and will be released. I also think that there's not sort of
10 evidentiary support for some type of, sort of, competitive harm.

11 And, in fact, the idea that these are trade secret
12 seems to me is exactly what Zuffa is arguing against. They're
13 arguing that in fact that they don't have a formulaic approach
14 to compensation, that there's not a standard way in which they
15 approach compensation. It's seems to me that it's hard for them
16 to argue consistently that this information is protected by a
17 trade secret or some other type of proprietary information.

18 Now, this doesn't apply to necessarily all of the
19 motions yet. Because what I am going to do is, based upon what
20 my decision will be, I may or may not seal some of the related
21 information. And so it does not mean that anything that's
22 necessarily mentioned in these reports would automatically be
23 unsealed.

24 And so to that, Mr. Kelly, I'll start with you as it
25 relates to Bellator. And, again, it would be my -- be my

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1 inclination to order that the information in the reports be
2 unsealed, because there's other information that was acquired --
3 that's attached, I believe, to the motions that may be more
4 detailed.

5 Again, I have not gone through and made an explicit
6 sort of comparison, Mr. Kelly, of the information that's
7 attached in some of the motions to the information that's in the
8 expert reports. But it does seem to me that the information as
9 it relates to Bellator is much more limited. And the reason why
10 I think it would be appropriate to unseal it is because it does
11 appear to present averages and not particular fighter
12 information as relates to compensation. To the extent that
13 there would be information in the documents that would -- that
14 would pertain to particular negotiations, particular fighters,
15 that would seem to me the information that could, in fact, be
16 kept sealed or redacted.

17 But as it relates to overall averages with respect to
18 percentages of revenue that are paid to fighters over the class
19 period of time, Mr. Kelly, it's hard for me to see how there
20 would be any kind of competitive harm. In fact, partly because
21 the information has already been released to the dominant the
22 player in the market, I'm not sure how there would be any
23 argument as relates to releasing publicly that information. But
24 I'll give you at least an opportunity.

25 MR. KELLY: Can I?

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1 Your Honor, I appreciate the opportunity. I just want
2 to address a couple of things. And I think you're right that
3 there are two distinct categories here that are relevant. One
4 is the high-level wage share category, and the other is the
5 high-level total revenue summary information. And I believe
6 that those are the two categories I'm told by counsel for
7 plaintiffs that are included in Mr. -- Dr. Singer's report.

8 We actually discussed a compromise over the weekend
9 with counsel for plaintiffs that they would not publicly display
10 those two line items in Dr. Singer's report, which obviously
11 assists Bellator's view.

12 The second category, as you mentioned, is a two-page
13 very detailed, very granular, compilation of Bellator's -- all
14 financial information, from top to bottom, all different revenue
15 categories, all different expense categories. That information,
16 I submit, should remain sealed. I do think even under a
17 compelling interest standard, it satisfies the requirements both
18 as, you know, highly confidential financial information --

19 THE COURT: And where is that attached? Because,
20 again, there's so many exhibits, there's so many motions, I want
21 to make sure that I identify where that is. So maybe you could
22 tell me or maybe plaintiffs' counsel can tell me.

23 MR. KELLY: I have no idea, Your Honor. Hopefully,
24 plaintiffs' counsel can tell us.

25 THE COURT: Can someone at plaintiff's table tell me

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1 where that detailed analysis for Bellator is attached so we can
2 figure that out.

3 MR. MADDEN: So -- you don't mind.

4 Yes, that particular spreadsheet is now part of our
5 presentations.

6 THE COURT: Okay.

7 MR. MADDEN: And I do want to be clear about the
8 compromise that we offered Mr. Kelly, is that our witnesses
9 could still testify freely about the information. It just
10 wouldn't be publicly displayed.

11 THE COURT: Right. Okay. So I didn't see that in the
12 report. Is that in Dr. Singer's -- attached to any of these
13 appendices anywhere?

14 MR. MADDEN: No. It's in the information relied upon,
15 but it is not an attachment to his report.

16 THE COURT: And to me that's significant --

17 Thank you.

18 MR. MADDEN: Okay. Thanks.

19 THE COURT: -- Mr. Kelly, because unless there's
20 information or averages that I'm using from third-party
21 information, that information would not need to be publicly
22 disclosed. The reason why I think the information in Dr. Singer
23 and Dr. Topel's reports should be disclosed, because I'm going
24 to be relying upon that information to make my decision. I
25 don't know how I could issue a public decision without

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1 referencing particularly some of the numbers, because the
2 numbers are exactly what's at issue in this case.

3 I don't -- I don't see how the detailed financial
4 information of Bellator would, in fact, come into play.
5 However, to the extent that I reference information, I will say
6 to you, I am going to unseal that information. However, it does
7 seem to me, in reviewing Dr. Singer and Dr. Topel's reports,
8 what you're looking at are comparisons that deal with sort of a
9 higher level averages and aggregates and revenues than the
10 specific financial details of Bellator.

11 So it was not my intention to unseal that detailed
12 level of information about Bellator.

13 MR. KELLY: Very good. I appreciate that, Your Honor.
14 Just from a practical standpoint, one thing that I've discussed
15 with plaintiffs' counsel is, during the hearing that's happening
16 over the next few days, they reserved the right to offer more
17 detailed information from that detailed spreadsheet, so below
18 the top-line financial, you know, the revenues or the wage
19 share.

20 And I understand that they need to do what they need to
21 do, but our concern is just from a practical standpoint as this
22 hearing progresses, what we need to do and how we can protect
23 Bellator's financial information in the event that an expert,
24 Dr. Singer, for example, says, "Oh, well, I need to refer to,
25 you know, these quarters and these specific revenue categories

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1 or these expense categories of Bellator." I think that's
2 highly, highly unlikely, from what I'm told, but I don't know.

3 THE COURT: So I'll make this both easy and difficult
4 for you, unfortunately. To the extent that it's relied upon and
5 I think that it's relevant, that will be unsealed. On the other
6 hand, given my review of the reports, I think it's highly
7 unlikely, Mr. Kelly, that that information at that granular
8 level would be relevant to my inquiry at this point in time.

9 However, if it gets to that point, I will tell you that
10 I'm going to unseal the information. I don't intend to have any
11 information that I would rely upon be part of a sealed record in
12 a public decision in this case, and so I would unseal it.
13 However, as I've said, I don't anticipate that that detailed
14 information would become relevant. And I'd be mindful of that,
15 if there was inquiry about that, to try to ensure that it was
16 necessary to the testimony at hand.

17 MR. KELLY: Very good. Thank you very much,
18 Your Honor. I appreciate that.

19 THE COURT: Sure. Not at all.

20 And I'm sorry, Ms. Grigsby, we just sort of jumped over
21 to Bellator. I don't know if you had any response to the
22 Court's order. And, again, it would be limited to the
23 information in the reports. There are other motions to seal
24 which I'm not going to address.

25 And let me be clear, as I've indicated, the parties'

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1 dispute revolved around these reports. I don't intend to issue
2 a decision that would be based upon any sealed information.
3 Much of the information in these reports is actually aggregate
4 information or in charts or summary form. And a lot of the, I
5 think, opposition -- or I shouldn't say -- the motion practice
6 regarding sealing does relate to more detailed financial
7 information, which at this point is not clear to me that the
8 Court will rely upon with respect to the decision before me at
9 this point in time.

10 MS. GRIGSBY: Your Honor, if I may just --

11 THE COURT: Sure.

12 MS. GRIGSBY: -- brief argument.

13 So, Your Honor, with respect to your ruling, we
14 understand that the vast majority of the report talks at a high
15 level. And in fact, you know, as we've been meeting and
16 conferring with plaintiffs, there have been fewer and fewer
17 redactions. But just looking through, for example, the
18 footnotes on Dr. Singer's report, there are actually references
19 to dollar figures, for example, the licensing fees, not in
20 aggregates, specifically, for one promoter.

21 And so while, you know, we understand your Court's
22 ruling in terms of things like, you know, yearly revenue wage
23 share, there just are a few discrete portions in the -- in these
24 reports that we would say actually qualify as kind of this --
25 the line-by-line sealed materials that this Court has not yet

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1 ruled upon.

2 And we would ask at least for an opportunity, when it
3 gets into the specifics, to keep those materials under seal.

4 So, you know, right now I'm just looking specifically --

5 THE COURT: That's fine. So, Ms. Grigsby, let me spare
6 you and counsel time.

7 MS. GRIGSBY: Okay.

8 THE COURT: Again, to the extent that I don't find that
9 I need to rely upon information that may be detailed
10 information, I would be willing potentially to entertain a
11 request to seal that information. Much of the argument in this
12 case revolves around regression analysis and sort of descriptive
13 statistics, which don't rely upon a single or particular figure
14 as relates to financial information.

15 MS. GRIGSBY: Your Honor --

16 THE COURT: And so based upon that, I can see where
17 there would be an opportunity to redact certain individual
18 pieces of information even in the reports. However, at this
19 time it's difficult for me to make that detailed a determination
20 when I haven't drafted my report.

21 What I will say is, it's not my intention to
22 necessarily simply just completely order the report be unsealed
23 during the duration of the hearing, but I'm going to -- it's
24 going to be essentially or effectively unsealed based upon the
25 testimony. So I'm not going to restrict the public in terms of

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1 their ability to participate or be present when there's
2 questioning, and that questioning can involve any aspects of the
3 report.

4 And so I would entertain a request subsequent to this
5 to be able to redact certain information, but we don't need to
6 go into that level of detail at this point in time.

7 MS. GRIGSBY: Yes, Your Honor. So just so we have some
8 clarity. So then, I guess, that would mean that now at least on
9 the docket then the reports are going to be in their current
10 form until we have an opportunity to determine what would fall
11 into that specific category that the Court has not yet ruled
12 upon. Is that correct?

13 THE COURT: Right. But I would ask that you come up
14 with, at the end or the close of the testimony today, references
15 to the footnotes in Dr. Singer's report or other aspects to the
16 report. Because I don't know that it makes sense to wait until
17 the very end. And given what you're telling me, in my review of
18 the report, I don't know that there are that many instances
19 where there are footnotes that have that type of information in
20 it. Again, I didn't go through all whatever hundreds of
21 footnotes are there, but what you're referencing seems to me to
22 be not sort of a frequent or common portion of the footnotes in
23 the report. But, again, I haven't gone through all of them.
24 But I would like to be able to unseal them this week.

25 So -- in the next two or three days. So I would ask

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1 that if you are going to want something unsealed, that you
2 provide me with a list of it and you run it by plaintiffs'
3 counsel, because it will be unsealed within the next day or two.
4 So I'm not going to do it immediately, given your request, but I
5 am going to allow for questioning on all aspects of the report
6 through the testimony.

7 MS. GRIGSBY: Your Honor, I have a second thing, which
8 is a follow-up question. So to the extent, though, that
9 Dr. Singer intends to testify about the licensing fee that Zuffa
10 received, say, in 2016 from, you know, a certain other promoter
11 or something of that like, then if that material properly could
12 be confidential, because it's financial information and it kind
13 of reflects the business model, then I guess it's Zuffa's
14 position that we don't think that plaintiffs should elicit that
15 specific testimony.

16 THE COURT: Oh, well, let me be clear, because I didn't
17 look at the particular footnote you're talking about. If
18 Dr. Singer thinks it's relevant as it relates to coordination
19 with other MMA promoters, or he think it's relevant as relates
20 to any aspect of exclusionary conduct, right, or any type of
21 inclusive effect, then that will come in and that will be
22 available for testimony.

23 So, perhaps, you could direct me, Ms. Grigsby, so we
24 could be focused on in terms of the -- about which specific
25 footnote you're talking about to help me.

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1 MS. GRIGSBY: So I'm looking at, like, Footnote 294.

2 Specifically now --

3 THE COURT: On which page?

4 MS. GRIGSBY: Page 73.

5 THE COURT: Okay. Hold on. Let me get there.

6 MS. GRIGSBY: So there --

7 THE COURT: Hold on just a moment. Let me just look at
8 it.

9 MS. GRIGSBY: Okay.

10 THE COURT: Well, that's direct evidence of what he's
11 using as an example as it relates to incentives regarding
12 competition. That -- if he is going to use that as an example,
13 that will be unsealed and will come in.

14 MS. GRIGSBY: Well, our argument isn't that this
15 arrangement itself or even with this -- with the other promoter
16 is something that should be sealed. It's more so the monetary
17 terms, which is not necessarily even relevant to his analysis.

18 But --

19 THE COURT: I don't think there's a compelling reason
20 to seal that information, so I'm not going to seal it.

21 Is there any other footnote you want to identify for
22 me, Ms. Grigsby?

23 MS. GRIGSBY: Your Honor, I think I would need to take
24 a little bit more time, and we will do that when we submit --

25 THE COURT: Well, and to the extent that it comes up in

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1 testimony, something, you can certainly lodge an objection that
2 I will then -- we'll go through the same analysis and look at it
3 in the context. But part of it also depends upon the analysis
4 that Dr. Singer intends to rely upon. So if, for example, it
5 turns out he doesn't necessarily rely upon this information and
6 you want to subsequently request that it be sealed, I would
7 entertain that. So part of it depends upon both what comes up
8 in direct and also what comes up in cross.

9 So the mere fact that I'm saying that I'm not going to
10 seal it now doesn't mean that I might not -- if it's not
11 substantive as it relates to my decision of the testimony might
12 not consider sealing it later based upon its relevance. So even
13 though I'm saying to you now, if he relies upon it, I'm going to
14 allow for him to testify about it. It doesn't mean you can't
15 subsequently make request about other information.

16 Do you understand?

17 MS. GRIGSBY: Yes, Your Honor.

18 THE COURT: So because, again, part of this is that it
19 depends upon what happens in the context of the testimony here
20 and also what the question is regarding both of the experts.
21 But it may very well be that some of the information can -- can
22 remain sealed, depending upon what my decision is and what the
23 testimony is.

24 MS. GRIGSBY: Your Honor, our only concern is that as a
25 practical matter, if Dr. Singer chooses to say, Zuffa received X

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1 amount for X, Y, and Z contract, a specific contract, not
2 necessarily generally about that net revenue or about total
3 revenue, annual revenue, then when Dr. Singer discloses that,
4 even if at some point the Court thinks that this is information
5 that is financial key to Zuffa's business strategy, we have a
6 courtroom where we have some outside observers. So we wouldn't
7 necessarily have the opportunity to keep it from being
8 publicized widely, for example, tweeted.

9 THE COURT: I understand that, but that I think is just
10 part of this public hearing process. And so I'm not going to
11 restrict the testimony at this point in time. Again, if
12 something comes up that we haven't discussed, I'd be willing to
13 entertain it at that time.

14 MS. GRIGSBY: Thank you, Your Honor.

15 MR. MADDEN: Your Honor, may I approach and ask a few
16 clarifying questions?

17 THE COURT: Sure.

18 MR. MADDEN: So we have prepared a slide deck that will
19 assist Dr. Singer to present his testimony. We have provided
20 Zuffa with copies in advance. So my question to you is based on
21 what you are telling the parties is whether we may display that
22 slide deck as unredacted or whether we have to remove materials
23 that have been deemed to be sealable, based on your rulings.

24 THE COURT: So you don't have to -- you don't have to
25 unredact the information, but if Dr. Singer wants to testify

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1 about what's redacted in the reports, he can.

2 MR. MADDEN: Well, it's not that the -- the slides
3 themselves. We have two versions of the slide deck in order to
4 prepare ourselves to proceed this morning. We have one where
5 we've removed the content of the slides, to the extent Zuffa or
6 a third party has challenged the publication of the material on
7 the big screen, and then we have a version that's -- that would
8 allow the public to see what's on these slides.

9 THE COURT: Well, I haven't seen the slides so I can't
10 tell you what they'll say. So what we'll do is this. We'll
11 just go through the slides. They won't be publicized at first.
12 They will just be publicized to counsel, the same we do with the
13 jury.

14 MR. MADDEN: Sure.

15 THE COURT: And then if there's an objection or issues,
16 then we can address them as they come up. But you can proceed
17 with the unredacted version of the slides, and then we'll -- and
18 then we'll address it as they come -- as they come up. So --

19 MR. MADDEN: Fair enough.

20 THE COURT: -- I'm not going to be sort of make an
21 advisory ruling on a whole batch of slides that I haven't seen
22 yet.

23 MR. MADDEN: I understand. I appreciate that. And we
24 will proceed that way. Thanks.

25 THE COURT: Okay. Thank you.

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1 Ms. Grigsby.

2 MS. GRIGSBY: Your Honor, just to expedite the process.
3 We've reviewed the slides, and based on the parameters the Court
4 has just given, we would agree to display these slides.

5 THE COURT: Okay.

6 MS. GRIGSBY: We have no objection.

7 THE COURT: Okay. All right. So ...

8 MR. KELLY: Sorry, Your Honor.

9 THE COURT: Hold on, Mr. Kelly. Let me -- Mr. -- who's
10 on the phone? I think it's Mr. Marroso and Ms. -- I'm sorry.

11 MR. MARROSO: Ms. Jenkins is on the phone, Your Honor.
12 She's going to make the argument for Top Rank.

13 THE COURT: Okay. So -- and I don't know whether or
14 not in the -- if you all have seen the reports and have had
15 conversations with counsel about what from Top Rank would be
16 discussed today.

17 Ms. Jenkins.

18 MS. JENKINS: Good morning, Your Honor. Yes, we
19 have -- we have not seen the full expert reports in this matter,
20 but we received excerpts from one of plaintiffs' expert reports
21 with a list of AEO designated information provided by Top Rank
22 that this expert relied upon.

23 Top Rank is only concerned with one paragraph,
24 paragraph 85, in expert Dr. Andrew Zimbalist's report. This one
25 paragraph contains Top Rank's fighter share revenue, what

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1 percentage it pays its fighters of its revenue for years 2014 to
2 2016.

3 THE COURT: Okay. And, Ms. Jenkins, what is the
4 objection? If this is aggregate information, again, I'm not
5 sure how that would overcome the standard here when it doesn't
6 appear to be related to particular fighters or fighter
7 arrangements or agreements or existing contracts.

8 As I understand it, the information with respect to Top
9 Rank would, again, be aggregate information. So I'm not sure I
10 understand what the nature of the argument is as relates to
11 business modelling or practice. One, because it seems fairly
12 clear to me that there's at least some general understanding of
13 the range of percentages that are paid with respect to the
14 revenue, but also it's going to be an aggregate figure.

15 MS. JENKINS: Your Honor, Top Rank's general counsel,
16 back in 2017 when plaintiffs originally thought some of the
17 complex Top Rank's confidential information explained how this
18 information, if disclosed, could cause harm to Top Rank.
19 Mr. Harrison Whitman, GC for Top Rank, stated that if Top Rank's
20 competitors had access to this information, they could mimic Top
21 Rank's business strategy. For example, our competitors could
22 attempt to poach boxers from Top Rank by --

23 THE COURT: But Ms. Jenkins --

24 MS. JENKINS: -- paid --

25 THE COURT: Ms. Jenkins --

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1 MS. JENKINS: -- and that is why we hold this
2 information as confidential and do not disclose it.

3 THE COURT: Well, I understand that. But you
4 understand the standard that applies here as it relates to this
5 being a dispositive issue, and the Court may need to rely upon
6 that information. And while there may be, as you understand,
7 arrangements in the context of discovery regarding production of
8 the parties, that's -- there's a different standard as relates
9 to this Court's decision about whether or not to unseal
10 information that it may intend to rely upon in a public opinion.

11 And, also, merely having a general counsel assert that
12 particular information is confidential and can be harmful is
13 certainly not sufficient to overcome the standard. And I
14 don't -- and I'm not persuaded by the idea that somehow an
15 aggregate figure would allow a competitor to mimic Top Rank's
16 negotiation with respect to individual contracts.

17 That being said, it's not clear to me that this
18 information would necessarily come out in the context of the
19 evidentiary hearing.

20 I will simply say that, as I've said to Mr. Kelly from
21 Bellator, that if in the course of this hearing the Court finds
22 it necessary and important to rely upon that information, that
23 information will be unsealed.

24 Hello?

25 MS. JENKINS: Thank you, Your Honor. We accept your

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1 proposal.

2 THE COURT: All right.

3 Now, I believe that there was one other objection that
4 was lodged by -- there's so many initials for companies here. I
5 don't want to misstate it. Is it WAE or WEA? Is that ...

6 MS. GRIGSBY: Your Honor, it's WME.

7 THE COURT: Thank you. Sorry.

8 MS. GRIGSBY: Yes, WME.

9 THE COURT: And I'm sorry, Ms. Grigsby, are you also
10 representing WME?

11 MS. GRIGSBY: For the purposes of this argument we are.
12 WME has acquired Zuffa, so ...

13 THE COURT: Well, I know that --

14 MS. GRIGSBY: Right.

15 THE COURT: -- but I just want sure who was going to
16 appear in court on their behalf, given the objection.

17 I think in this context, Ms. Grigsby, my same ruling
18 would apply as relates to WME. It's not clear to me that
19 there's a great deal of financial information. There's some
20 reference in Dr. Singer's report to a change in business
21 practices without specifying necessarily detailed information
22 about what those may or may not be. There is some information
23 in the report that would involve projections.

24 It's not clear to me, until I hear Dr. Singer or
25 Dr. Topel's testimony, how relevant or necessary that

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1 information is unless it involves an understanding or an
2 assessment. Because there is part of if where there's an
3 assessment of what the current market is as it relates to
4 competitors to Zuffa that I think is relevant.

5 But there's a whole separate part of the analysis for
6 the due diligence that involves, I think, a financial projection
7 about what could essentially be financially achieved. I don't
8 know that any of that is necessarily based upon or relevant to
9 what the inquiry the Court has.

10 And so I would certainly allow you, to the extent that
11 comes up, to argue for a certain amount of information as
12 relates to financial projections regarding the acquisition to be
13 sealed.

14 MS. GRIGSBY: Yes, Your Honor. And now that I'm up, I
15 just had one other point of clarification.

16 THE COURT: Sure.

17 MS. GRIGSBY: Just as I'm looking through plaintiffs'
18 slides, so we were under the assumption that plaintiffs are
19 talking about the slides they handed to us today. I have
20 noticed just -- it's not necessarily visible, but plaintiffs and
21 Zuffa have made an agreement that whenever something discusses
22 or a document or exhibit discusses an athlete, that we will not
23 specifically reference that athlete.

24 I'm assuming that we are still going to operate under
25 those parameters where there are, you know, third-party

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1 information, so that we will not disclose that to the public.

2 THE COURT: Well, there is except there's certain parts
3 of the reports that deal with headliners. And there's certain
4 parts of the report where I think there are references to or
5 quotes from certain fighters, for example, accounting for a
6 certain percentage of the revenue as a way to indicate how
7 limiting the supply of fighters can be -- result in antitrust
8 injury. And I think that's actually a quote from another
9 source, if you know what the portion of the report that I'm
10 talking about.

11 MS. GRIGSBY: Yeah.

12 THE COURT: If that's the case, then certainly I think
13 that can be used, but that's not, from what I understand,
14 talking about individual fighter negotiations.

15 MS. GRIGSBY: I'm referencing individual fighter
16 negotiations --

17 THE COURT: Okay.

18 MS. GRIGSBY: -- where the language may be something
19 that plaintiffs are using to support their argument, but the
20 identity of the fighter is not really relevant or essential, in
21 our view, to Dr. Singer's opinion. So it would really just be,
22 you know, keeping confidential the name of these athletes or
23 say -- you know, who are being negotiated on behalf of for
24 individual deals.

25 I think both parties before had discussed just not

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1 necessarily referencing the athlete him or herself if we're
2 talking about that person's individual compensation information.

3 THE COURT: And I think that would be appropriate. I
4 don't know that there's going to be any such testimony here, but
5 if it comes up, we can address that as it comes up.

6 So I believe I have addressed all of the questions
7 relating to sealing. And any other sort of housekeeping matters
8 we need to deal with?

9 Oh, Mr. Silva?

10 MS. GRIGSBY: Yes, Your Honor.

11 Mr. Silva was my witness. And as we thought we filed,
12 we needed to postpone his testimony.

13 THE COURT: So why don't we do this. Whoever is going
14 to talk about this issue, why don't you all come over to the
15 sidebar with me just for just a moment, please.

16 (Whereupon, the following sidebar conference was
17 reported, but not transcribed.)

18 THE COURT: Okay. So are there any other housekeeping
19 matters I need to deal with before we bring Dr. Singer on?

20 Mr. Cramer?

21 MR. CRAMER: Your Honor, we filed a motion relating to
22 some 22 summary exhibits, or so-called summary exhibits that
23 Zuffa has put in the record. And I think in order to cut it
24 short, I think what the -- and I was talking about this with
25 Mr. Isaacson before we came here. I think what we would like to

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1 understand from Your Honor is whether Rule 26 is going to be
2 enforced. In other words, will the experts, when they take the
3 stand, be held to the opinions set out in their reports?

4 Because what we've seen from some of these new exhibits
5 is that they're really new expert analyses. Zuffa hired a new
6 consultant, Dr. Lustig, to create a number of exhibits. They
7 have new analyses.

8 THE COURT: Right. No, this -- let me be clear.
9 They'll be limited by the testimony that is identified in the
10 reports that are submitted for me with respect to the motion to
11 certify. This is all about the motion to certify. If we get to
12 a trial, we can talk about whether that happens. But that's,
13 from my standpoint -- from my standpoint, seems to be some
14 period down the road.

15 For now, the testimony will be limited in the context
16 of the reports that the various experts authored. Right. So
17 they will not be able to go outside the confines of their
18 reports that they've offered, except to the extent they're
19 questioned about something that would lead to eliciting some
20 elaboration of information that they have provided.

21 So as it relates to the summary exhibits, I don't think
22 if they're based upon new information, that that would be
23 appropriate. I also think, quite honestly, the parties should
24 limit their exhibits as relates to summary descriptive
25 information to what the experts themselves used as charts in

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1 their reports.

2 So that's what I'm going to be looking to. I'm not
3 going to be looking to new exhibits that are essentially trying
4 to summarize what's in the reports. If you want to clarify
5 something about an expert's testimony, use their report to do
6 so. But I don't think it's appropriate to have a summary report
7 of an expert's report unless it's a direct reference to what's
8 in the report itself.

9 MR. CRAMER: Thank you, Your Honor. That -- that is
10 helpful and instructive.

11 A separate question would be whether Zuffa would be
12 able to use these summary exhibits on cross-examination and then
13 say, Well, we've crossed -- we've crossed the -- with Dr. Singer
14 on it, so now Dr. Topel gets to testify about that. We think
15 that that would be improper.

16 THE COURT: Well, so part of it depends upon, again,
17 what the testimony is.

18 MR. CRAMER: Okay.

19 THE COURT: Summary exhibits that summarize testimony
20 are permissible. Summary exhibits that essentially bring in new
21 testimony or offer new testimony would not be permissible.

22 Now, again, it's difficult for me to say what 's
23 summary or not because I haven't heard some of the testimony.
24 So I'm reluctant to sort of issue blanket rulings --

25 MR. CRAMER: Fair enough.

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1 THE COURT: -- on information. However, I do want to
2 offer you all guidance, which is I don't expect there to be
3 summary exhibits for testimony that's actually not in the
4 record. So you can summarize something that's in the record
5 if -- if you think it may be helpful to me. I may not think
6 it's helpful. I may not admit it anyway. So that's also
7 something to understand.

8 The purpose of this is to help me decide. And so I'm
9 saying that to you so you all understand that at times I may cut
10 you off. I'm not meaning to be abrupt or rude, but the fact of
11 the matter is that I have to make this decision based upon my
12 understanding of the information. It's not essentially to
13 represent the entire argument for both sides. I've read those
14 arguments multiple times, and so I don't need that necessarily.
15 So I may at certain points urge you to move on in different
16 directions.

17 But I don't think it would be appropriate to go beyond
18 the expert's own reports. I mean, obviously, the rules of
19 evidence don't strictly apply in this type of a hearing, but I
20 try to adhere to them as closely as possible because they do
21 create certain level of reliability as it relates to
22 information.

23 MR. CRAMER: Okay, Your Honor. I appreciate that.

24 There's one fine distinction that Zuffa seems to be
25 making with some of these exhibits. They say that while the

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1 exhibits merely summarize backup data that's in one report or
2 another. And it seems to me that if you're applying new
3 analysis and new reasoning and charting new information --
4 charting the information in a new way --

5 THE COURT: Well, there's a difference between a
6 summary of backup information and statistical analysis. So if
7 you're summarizing information, fine. If you want to ask an
8 expert, Wasn't this part of what you considered, and if you did,
9 why did you consider this in relating to your modelling, that's
10 fine. I don't want there to be offered by either side competing
11 modeling for what exists in the reports. That is not the
12 purpose of this hearing. I don't want someone to be rerunning
13 regression analysis unless it was already in the reports that
14 existed.

15 Now, if someone wants to take again descriptive
16 statistics and say aren't these part of the statistics,
17 that's -- from my standpoint, that's not redoing analysis,
18 right. There's -- there are substantive distinctions between
19 descriptive statistics and the summary of descriptive statistics
20 and running sort of standardized sort of regression analyses
21 with respect to the different modelling that occurred in this
22 case.

23 So I have to see some of these -- how they're used in
24 relation to the testimony. So I tend to allow lawyers some
25 latitude as it relates to how they want to use exhibits

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1 regarding cross-examination because I can ultimately decide
2 whether or not I think it's helpful. And you can make your
3 objection, and I can rule on it based upon that. We don't have
4 a jury here so that allows for me to be able to hear the
5 arguments and rule and move forward as it relates to exhibits
6 and testimony.

7 MR. CRAMER: I understand. Thank you, Your Honor.

8 THE COURT: Sure.

9 Ms. Grigsby, yes.

10 MS. GRIGSBY: If you're handling evidentiary
11 objections, Zuffa did have one outstanding objection.

12 THE COURT: Sure.

13 MS. GRIGSBY: Your Honor, we've resolved all of our
14 objections to plaintiffs' exhibits apart from one, which is
15 Plaintiff's Exhibit 481. It is an expert report of Gene Deetz,
16 which is redacted and it was submitted in the Golden Boy v.
17 Harmon litigation.

18 THE COURT: Right.

19 MS. GRIGSBY: And our objection is basically based on
20 the parameters that this Court set earlier, which is to say you
21 were going to let most things in. You know, it wasn't -- you
22 really didn't want the hearsay or relevance objections, but you
23 did say the other is whether there -- or not there's something
24 that either side views as so completely unreliable that the
25 Court really should not consider it. And we -- we actually

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1 believe that the Deetz report falls within that category.

2 Plaintiffs, through this litigation, actually
3 subpoenaed Golden Boy.

4 THE COURT: Right.

5 MS. GRIGSBY: They received records and data from
6 Golden Boy. But instead of using that information, they are
7 using a redacted expert report, which you -- everybody
8 understands is hearsay in different litigation.

9 THE COURT: Ms. Grigsby, let me stop you, and let me
10 ask them how they're going to use it to see whether or not I
11 even need to rule on this.

12 Ms. Grigsby, you can stay up or just, if you don't
13 mind, moving to the side.

14 MR. SILVERMAN: Your Honor, we don't -- this exhibit is
15 the underlying data that's the basis of Dr. Zimbalist's
16 calculation of Golden Boy's wage share. And, essentially, we
17 have two competing calculations here. We have Dr. Zimbalist's
18 calculation relying on the data that was attached to this
19 report; and we have Dr. Blair's calculation, which is relying on
20 the data which Golden Boy produced in response to the subpoena.

21 We believe this is a battle of the experts about which
22 is more persuasive, and not a proper matter for Daubert or for
23 an evidentiary ruling in this hearing. But we are planning to
24 present Dr. Zimbalist's results of that calculation in the
25 hearing.

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1 THE COURT: Well, you haven't referenced the Deetz
2 report, and he's going to be relying upon that report or what --

3 MR. SILVERMAN: So he's not -- no. Your Honor,
4 Dr. Zimbalist is not relying upon the report or upon Dr. Deetz's
5 opinion that he -- that he reaches in that report. What this
6 report is, is it's an expert report that was authored by
7 Dr. Deetz. Dr. Deetz was hired by -- by Golden Boy in an
8 antitrust litigation that they brought against Haymon, and that
9 report was filed publicly on the docket and attached the data
10 that Dr. Deetz relied on from Golden Boy. And that data
11 summarized Golden Boy's revenues and the -- their fighter
12 expenses. And it attached detailed records of the -- of the
13 amounts that the fighters were paid and the revenues that the
14 events generated. So Dr. Zimbalist relied on that data.

15 THE COURT: So he's not relying upon the conclusions;
16 you're saying he's relying upon --

17 MR. SILVERMAN: Just the data that was attached to the
18 report.

19 THE COURT: Ms. Grigsby.

20 MS. GRIGSBY: So Dr. Zimbalist said in his deposition
21 that he did not take any steps to independently verify this
22 data. Obviously, an expert can rely on anything that an expert
23 would reasonably rely upon in their field. But there is ample
24 case law, we briefed it in our Daubert, that this is just not
25 one of them. If Dr. Zimbalist took no steps and also, on the

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1 other hand, had access to the actual data produced by the third
2 party, it is inadmissible and, in fact, inappropriate for
3 Dr. Zimbalist to rely on that data.

4 And plaintiffs separately have offered this in as an
5 exhibit. I mean, it sounds like they're saying that
6 Dr. Zimbalist isn't really going to testify on the Deetz report.
7 So it's unclear why this would even be an exhibit in this
8 hearing.

9 THE COURT: Okay. Well, what we'll do is I'll address
10 it when it comes up, depending upon how it's used. It doesn't
11 seem to me that's necessarily going to be a significant part of
12 Dr. Zimbalist's testimony. To the extent that I find it to be
13 something that he relies upon or uses, then I will consider,
14 Ms. Grigsby, the arguments about the reliability of the
15 information when evaluating the modelling that's being offered.
16 Okay?

17 MS. GRIGSBY: Yes, Your Honor.

18 THE COURT: So for now I'm not going to rule on that
19 particular objection until I hear the testimony.

20 MR. SILVERMAN: Thank you, Your Honor.

21 THE COURT: Thank you.

22 All right. So -- oh, before we begin, I'm sorry, who's
23 going to be cross-examining Dr. Singer?

24 MR. ISAACSON: That would be myself, Your Honor.

25 THE COURT: Mr. Isaacson, why don't you come up to the

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1 podium for a moment.

2 I would like for you to summarize what are the main
3 contentions you have about the modelling in this case as it
4 relates to Dr. Singer's report so, again, I can help to focus
5 this testimony.

6 MR. ISAACSON: I would appreciate that. Let me get my
7 binder.

8 THE COURT: Oh, sure.

9 And I say that, Mr. Isaacson, because part of the issue
10 here is, I don't want us to spend time on necessarily factors
11 that Dr. Singer or Dr. Topel are allowed to choose as expert
12 statisticians. They're really about sort of their judgment
13 necessarily, unless they go to the effectiveness of the
14 modelling. And I say that because those are important
15 distinctions in this case, and I understand that you've made
16 arguments about sort of not inclusive of -- the modelling not
17 being inclusive of procompetitive effect.

18 I first want to ask you, what is it you specifically
19 understand as the procompetitive conduct, right, that Dr. Singer
20 and Dr. Topel should have and should be considering in the
21 context of the modelling in this case?

22 MR. ISAACSON: So -- and Dr. Topel is going to begin on
23 this point, but the -- it would be everything that Zuffa does,
24 and this is the history of the Zuffa business, to build the
25 market, to build revenues, that would include --

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1 THE COURT: Okay. But what does that mean? Because
2 everything Zuffa does --

3 MR. ISAACSON: It includes building your brand,
4 marketing. It's the productions of the events, which are unique
5 to Zuffa.

6 THE COURT: Okay. Because I want to be specific.
7 You're saying marketing and branding, right?

8 MR. ISAACSON: Yes.

9 THE COURT: Okay. Of Zuffa or the industry?

10 MR. ISAACSON: Of Zuffa.

11 THE COURT: Okay. Marketing and branding.

12 MR. ISAACSON: That has a benefit to the industry,
13 probably, but we're focusing on Zuffa.

14 THE COURT: Okay. Marketing and branding. The manner
15 of the presentation of the events?

16 MR. ISAACSON: Yeah -- not -- so you understand that
17 unlike, for example, an NFL game where the NBC or Fox are
18 producing the game, Zuffa does the production --

19 THE COURT: Right.

20 MR. ISAACSON: -- not the television station.

21 So -- and so that's how the show is put on. That
22 includes the bio -- the biographical and stories that are told.
23 It's the whole production of events. So if you think about
24 the -- how the -- when you watch the Olympics, how that's
25 evolved from, you know, from the '60s when you have a certain

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1 type of presentation to now how there's a -- they build stories
2 around athletes and tell those stories and have events. All of
3 that is going on. And you're going to hear some of that also,
4 you know, because that requires some knowledge of what these
5 things look like.

6 THE COURT: Let me ask you a question. Could the
7 television -- television networks have done it themselves under
8 the contracts they had with Zuffa?

9 MR. ISAACSON: No. Under the -- this is -- you would
10 have to redo the contracts.

11 THE COURT: I'm sorry?

12 MR. ISAACSON: You would have to redo the contracts.

13 THE COURT: So, in other words, the television stations
14 weren't actually permitted, even if they had wanted to, by the
15 contracts, to do this. This was something that Zuffa took on
16 itself.

17 MR. ISAACSON: This was something the two parties
18 agreed to in their contracts.

19 THE COURT: Okay. No, that's fine. Again, I want to
20 understand because part of this is about the choices. Okay.
21 So --

22 MR. ISAACSON: Right.

23 THE COURT: -- so the other thing --

24 MR. ISAACSON: And --

25 THE COURT: -- is the manner of the production

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1 including all of the background information, the biography of
2 the fighters, and sort of building the story around a particular
3 bout.

4 MR. ISAACSON: Right. And then -- and then you will
5 also hear about -- by the time the hearings conclude, we have to
6 get all the way through Mr. Silva, but how Zuffa goes ahead and
7 builds stars, builds athletes, makes them more prominent.

8 THE COURT: Okay. What does that mean?

9 MR. ISAACSON: Well, if you take, for example, Conor
10 McGregor, who is identified as a relatively unknown fighter, and
11 then is marketed and built as a star, and becomes a star, that's
12 what that means.

13 THE COURT: No, but you're saying "built as a star." I
14 don't know what "built as a star" means.

15 MR. ISAACSON: That means -- that means working with
16 the individual -- that means marketing the individual. That
17 means matchmaking, making sure that you have appropriate matches
18 that build an audience. It's -- it's the -- it's what Zuffa --
19 it's what Zuffa does for its business.

20 THE COURT: Well, but it's not that, Mr. Isaacson,
21 because here's what I don't want to have happen.

22 MR. ISAACSON: Right.

23 THE COURT: I don't want to have these questions from
24 either side where someone's going to ask, Did your modelling
25 include procompetitive conduct?

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1 MR. ISAACSON: Right.

2 THE COURT: That's a legal term, legal definition.

3 That doesn't tell me anything. Right. And so -- and so if

4 Dr. Singer or Dr. Topel, whoever says, Oh, I included

5 procompetitive effects or didn't, that's actually not helpful to

6 me either. Because, obviously, the modelling is very specific

7 about -- and there are very -- there's various other aspects of

8 the conduct that are going to be important. And so that's why

9 I'm asking and I'm going to be asking both sides to be clear

10 about when they specify when they talk about conduct,

11 particularly if there's going to be argument from both sides

12 about what conduct is not included in the modelling plan.

13 MR. ISAACSON: And I don't think -- so in terms of

14 defining the dispute -- and one of the things we did try, in

15 light of your comments at the last hearing, Your Honor, we did

16 try to file something --

17 THE COURT: Yeas, I read that. Right.

18 MR. ISAACSON: The -- I think what you are going to

19 hear is, it's not that Dr. Singer says Zuffa does nothing. He

20 certainly thinks the fighters are -- you know, are really,

21 really important, but not that Zuffa doesn't do anything

22 procompetitively. What he talks about is his model takes --

23 what matters for his model is whether those two things are

24 relatively proportional to one another. And that's what you're

25 going to hear about. And you will hear from both experts as to

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1 whether that dispute validate -- whether he has a valid model
2 with that assumption or not. All right?

3 THE COURT: Well, okay --

4 MR. ISAACSON: I don't think the argument -- the
5 argument is not going to be that Dana White is not a really
6 important marketer for Zuffa. The argument is not going to be
7 that we don't do these productions and the productions are
8 valuable. No one -- I don't think Dr. Singer will say he's
9 tried to measure that specifically. If he does, that would be
10 news -- that would be -- that's not in his reports.

11 What he's saying is that because of -- and he's going
12 to talk about this notion of marginal revenue product, and I
13 don't want to put words in his mouth, but he talks about
14 proportionality. As long as these things move proportionately,
15 then his model takes it into account. And you're going to hear
16 that again with Dr. Manning and Dr. Oyer in the middle of
17 September. That discussion continues with them.

18 And I'm not going to proceed into argument about this,
19 but I think that is the nature of the debate with respect to
20 that issue of modelling.

21 So what I -- to answer your initial question broadly, I
22 intend to talk to Dr. Singer about what is the challenged
23 conduct that he has assumed for his model, what is the
24 challenged conduct in that. I intend to talk to him about the
25 foreclosure share concept. I intend to actually -- see, this is

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1 going to be the tricky part, and this is going to be for your
2 benefit, hopefully. I'm going to actually try and get some
3 simplified expressions of the formulas he's using. What's the
4 foreclosure share? What's the fighter share? So that -- and I
5 want something that's agreed. This won't -- and I want
6 something that we can look at as we go forward.

7 And I want him then -- I also want to do that for
8 purposes of the regression. Not a writing out a regression
9 formula because that -- that won't help any of us, but to
10 understand the basic things on either side of the regression and
11 see if we can get agreement on just what he did. Because, like
12 you said a little while ago, it's the numbers that matter here.
13 And these formulas that generate the numbers I think will
14 illustrate --

15 THE COURT: So you're not arguing -- I just want to be
16 clear. You're not arguing -- I don't think that you're arguing
17 that he used nonstandard forms of regression analysis.

18 MR. ISAACSON: I'm sorry, non --

19 THE COURT: Standard forms or accepted forms of
20 regression analysis.

21 MR. ISAACSON: No. We're saying that both sides of the
22 regression are invalid. The foreclosure share is not an
23 accepted concept, and the fighter share of -- or the
24 compensation share of revenue is not an accepted or meaningful
25 concept.

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1 THE COURT: And I just want to be clear. Accepted by
2 whom?

3 MR. ISAACSON: By economists or, we think, by courts.
4 And we don't think he's following relevant legal standards
5 for -- for either. The --

6 THE COURT: Okay. Okay. So again -- go ahead. I'm
7 sorry. Go ahead.

8 MR. ISAACSON: So we will talk about, then, some of
9 the -- so that the Court understands it, we'll talk about,
10 then -- and this will be difficult, but trying to get some
11 agreement on what the variables are in his regression in a
12 way -- I have no background in economics, Your Honor, so I'm
13 speaking as a layperson. And I hope to speak to you as a
14 layperson and to have these people talk to us as lay people.

15 THE COURT: Okay. That's helpful. I do have some
16 background in regression analysis. So I don't know that the
17 models are necessarily that difficult to understand from a
18 regression standpoint, but I do think it's appropriate for me to
19 be able to also explain them, to the extent that I'm writing my
20 opinions based upon them, in terms that everyone can understand.

21 But that's also why I just want to make clear about
22 there can be differences -- even in the context of regression
23 analysis, there are often common aspects of regression analysis
24 that would indicate the analysis itself is invalid. I have not
25 heard, I just want to be clear, from you that the -- sort of the

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1 various factors from a statistical standpoint that indicate a
2 regression analysis is not valid or that it is not capturing the
3 variability that it's intended to capture have been presented or
4 identified here. Is that right?

5 MR. ISAACSON: I think to be clear, I don't think I'm
6 going -- the point of our presentation is not to attack matters
7 of judgment, all right.

8 THE COURT: Well, no, that's not what I'm asking you,
9 actually, because I want to be clear about this. That's why I
10 partly want to do this, which is in the context of regression
11 analysis there are going to be certain indicators when you
12 validate the analysis that would show that the analysis itself
13 is not valid or that it's not within a particular confidence
14 interval or doesn't capture a certain degree of variability.
15 And that there will be certain tests that can be done or certain
16 indicators in the analysis which will show that the analysis
17 itself is invalid.

18 I want to just make sure, because I didn't understand
19 you to be arguing this, that you're not arguing that in the
20 analyses that are done by Dr. Singer or Dr. Topel that the
21 analyses themselves, from a regression or statistical
22 standpoint, are invalid in terms of the results that they
23 achieve.

24 MR. ISAACSON: So we won't be -- that's a very broad
25 statement being made to a lawyer who's intending to attack this

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1 regression. I'm not going to be discussing confidence interval.
2 I'm not going to be questioning the statistical significance
3 findings.

4 THE COURT: Okay.

5 MR. ISAACSON: The -- I will be pointing to -- there
6 are variables where the results in -- and this is in the expert
7 reports, where the results indicate that that -- if you're
8 getting that result, there must be a problem with the
9 regression. I don't know if that falls under the umbrella of
10 your broad question. It might.

11 THE COURT: It does.

12 MR. ISAACSON: Okay.

13 THE COURT: And so I wanted just to be clear about what
14 those are. So there will be some arguments that you'll make
15 about the ratios and proportionality that you think are not
16 reflected in the actual results of regression.

17 MR. ISAACSON: Right. And we will --

18 THE COURT: And you also make arguments about the
19 judgment used in terms of identifying the variables. Because it
20 seems to me one of your arguments is -- relates to -- or a
21 couple of the arguments relate to how appropriate the various
22 variables are and the effects that are noticed to reach the
23 conclusions that Dr. Singer reaches.

24 MR. ISAACSON: Right. We -- we will be saying to you,
25 just like we would say in a products liability case if there was

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1 some type of scientific diagnosis that had never been used
2 before, that they are plugging things into this regression that
3 no Court has accepted before. And -- and that's what we are
4 going to be discussing. That's both on the foreclosure share
5 side and on the fighter share side.

6 And there are subchapters to those stories, such as the
7 use of weighting, such as the Strikeforce data that comes in
8 that's used, and there is -- and you will see in Dr. Singer's
9 presentation that he will also be explaining how he defines his
10 markets. Because when you're talking about foreclosure share
11 that's -- it's a share of something, and he's got to have a
12 market underlying that. So you will be hearing from both sides
13 about market-share-type issues.

14 And then you'll hear a little bit about the identity
15 class and the -- we'll be spending most of the time on -- you
16 know, they are trying to show that all or virtually all class
17 members were injured. They have a regression that does that.

18 They have a secondary analysis -- a second analysis
19 that indicates that there are -- there's a payment structure,
20 which includes another regression, at least another regression
21 that would indicate that effects would be spread. But that -- I
22 think we will have agreement that that second analysis doesn't
23 actually try to show the effect; it just shows an effect would
24 be spread. So we will be focusing on the analysis that shows --
25 that they shows an effect on all or virtually all class members.

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1 And we will be attempting to show that it doesn't meet
2 the standard when you -- of rigor or persuasiveness, which we
3 think is what the relevant and also --

4 THE COURT: Well, we have a new decision from the Ninth
5 Circuit which is, I think, quite helpful as it relates to the
6 standard.

7 MR. ISAACSON: We agree with that, Your Honor. And
8 we've made a filing on that last night. I don't know if you've
9 had a chance to see it.

10 THE COURT: I did.

11 MR. ISAACSON: Okay.

12 THE COURT: So I think that that helps -- I mean, well,
13 it's somewhat helpful. So that's helpful for me, Mr. Isaacson,
14 because, again, I want to -- I've read the reports and I don't
15 want us to spend -- I want to understand where it is that -- and
16 again, I've read your briefing. I want to understand where we
17 are today. Because really what I want to focus on are the
18 aspects of the report -- the analysis that you find to be
19 problematic, and not necessarily going over and summarizing all
20 of it, the relevant input market, the relevant input submarket.
21 We don't -- I really don't want the parties to spend a lot of
22 time on that. I've read that. And so I really want to get to
23 the meat of what the disagreements are as it relates to the
24 modelling.

25 So I'm just saying that for all -- for everyone's

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1 benefit. It's certainly -- you -- and you can assume that I've
2 gone through this, because I have multiple times. So we don't
3 have to spend lots of time on background information. Right.

4 MR. ISAACSON: Right. I hope very much to get to the
5 meat of this. I will say as, also, another person who has been
6 through this, that even when you've been through it, sometimes
7 there's a few things that don't jump out at you. So sometimes I
8 will be doing some background to make sure we're all on the same
9 page.

10 THE COURT: No, I'm not saying we shouldn't do
11 background. What I'm saying is you don't have to explain to me
12 what MMA stands for.

13 MR. ISAACSON: Yeah.

14 THE COURT: Right? Or --

15 MR. ISAACSON: Okay.

16 THE COURT: -- UFC or Zuffa. No, I'm joking. But I'm
17 just saying that --

18 MR. ISAACSON: I'll take that section out of my
19 outline. Yeah, yeah.

20 THE COURT: So I think just to the extent that, for
21 example, if you hear me say, I understand that, move along, you
22 understand that I'm familiar with that area and we can move from
23 that. And I assume -- because I assume -- I would expect the
24 testimony to go somewhat the same way that Dr. Singer's report
25 goes, which actually gives background. And, basically, as you

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1 move through the report, it gets more and more detailed for
2 certain aspects and gets to the common effects, basically, at
3 the end. I would expect that's what's going to happen here.

4 But thank you, Mr. Isaacson. That's helpful for me to
5 clarify.

6 MR. ISAACSON: And sometimes when a Judge says move
7 along, you feel like you're doing poorly. This is a dialogue
8 between us and the Court. And so if something is not serving
9 your purpose, then it will not be taken personally. And if I
10 think I'm making a point, I will just talk to you about it and
11 say -- and then, so we're on the same page, and you say, No, I
12 100 percent completely understand that, then I'll move on.

13 THE COURT: Okay. Well, I think you've appeared in
14 front of me, Mr. Isaacson, to know that if I have a question, I
15 will certainly ask you.

16 MR. ISAACSON: We look forward -- we look forward to
17 the questions.

18 THE COURT: All right.

19 MR. ISAACSON: We look forward to the questions.

20 THE COURT: All right. Thank you. I appreciate that.

21 And go ahead, Mr. Cramer. I don't expect you're going
22 to need to go through the same review. So I'm going to ask you
23 the same question when Dr. Topel takes the stand that I asked
24 Mr. Isaacson. The reports sort of speak for themselves. I
25 expect, then, on the direct you're going to walk through the

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1 report. And the report even has some anticipation of the
2 arguments, even some of the arguments that Mr. Isaacson has
3 raised in the rebuttal report.

4 So I don't need to actually ask for your summary. I
5 mean, if you'd like to give summary brief, you can. But that's
6 not necessary. It really is to focus on the critiques from both
7 sides of the modelling that's been offered because that's the
8 area that's going to be a little more fluid than what's been
9 presented as the appropriate modelling in the context of the
10 case.

11 MR. CRAMER: Your Honor, we understand that and we
12 appreciate it. And this is an area where Mr. Isaacson and I
13 agree. That, in particular, I think explaining some of the
14 building blocks, even if it seems redundant, sometimes is
15 necessary. And Mr. Isaacson went through his critiques, and
16 we're going to go through -- we're going to frame the issue,
17 right, is the conduct that we're talking about anticompetitive
18 or procompetitive. That's the big dispute between Dr. Topel and
19 Dr. Singer.

20 And then the key question is whether Dr. Singer is able
21 to isolate the affect of the anticompetitive part of the
22 conduct, the foreclosure share, and show impact in damages from
23 the foreclosure of competition. And that's the -- that's the
24 big dispute. And that's what we're going to spend our time on.

25 But in order to get there, we have to -- foreclosure

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1 share, as Mr. Isaacson said -- Isaacson said involves discussion
2 of what the market is. And so we have to, a little bit, talk
3 about the market and the underlying theory of the market to talk
4 about foreclosure share, talk about wage share and why we use
5 that metric, and then talk about the model, explain how the
6 model works, how we take into account the variability of
7 compensation in the model, and show how we show how the effects
8 of the conduct are felt widely across the class, both with
9 regression itself and with a secondary analysis showing that
10 there's a structure where all of the pay of all of the fighters
11 moves together through time.

12 Dr. Topel and Dr. Singer agree on that point. That the
13 fighter pay from the lowest rung to the highest rung has moved
14 together through time -- or at least moved in lockstep over the
15 course of the class period. And our point there is that that
16 indicates that the fighter pay is connected. The pay of the low
17 and the pay of the high are in some way related. And so if
18 there's a general effect on compensation, as we say the
19 regression shows, that's going to have a widespread effect.

20 So that's what we're going to do for Your Honor today.

21 THE COURT: Well, let's get going.

22 MR. CRAMER: Let's do it.

23 THE COURT: Thank you.

24 COURTROOM ADMINISTRATOR: Please raise your right hand.

25 HAL JASON SINGER, Ph.D., having duly been sworn, was

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1 examined and testified as follows:

2 MR. CRAMER: Your Honor, if I may, I have copies of our
3 slide deck that I'd like to hand up to the Court.

4 THE COURT: Well, you're not going to do it through
5 the ...

6 MR. CRAMER: We are, but there's --

7 THE COURT: No, no. You know, I'm not a big paper
8 person. So --

9 MR. CRAMER: Okay.

10 THE COURT: -- let's just use the monitors, please.

11 MR. CRAMER: That's fine. We'd like to enter it into
12 the record at the end so that you can -- you have a souvenir to
13 take home with you.

14 THE COURT: Well, I mean, I don't know that I need to
15 enter sort of these type of exhibits. I mean, I'll keep a copy
16 of them for reference purposes. If I think I need to enter or
17 rely upon it, I will, but I'm going to rely upon the testimony
18 as the actual evidence that the Court will use.

19 MR. CRAMER: Okay. That's fair enough.

20 MR. ISAACSON: Your Honor, since these are
21 demonstrative exhibits and they're not evidence, but we would
22 like them lodged on the record. The parties can do at the end
23 of the day if you want.

24 THE COURT: Yes, that's true. I just want to be clear
25 about the fact that I don't view them to be separate and

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1 substantive evidence of what they purport to represent.

2 COURTROOM ADMINISTRATOR: Can I have you state and
3 spell your name for the record.

4 THE WITNESS: Sure. Hal Jason Singer, H-A-L,
5 J-A-S-O-N, Singer, S-I-N-G-E-R.

6 MR. CRAMER: And we need the Court's system turned on
7 so we can put the slides on the screen.

8 (Court conferring.)

9 THE COURT: So, again, Mr. Isaacson, Ms. Grigsby, so
10 there's no -- where's -- oh, you moved to the side of it.

11 There's no objection to any of these slides from the
12 deck that you've seen. Is that correct?

13 MR. ISAACSON: That -- not on confidentiality grounds,
14 and I don't think on any other grounds, though, I --

15 THE COURT: Well, the relevance grounds is a separate
16 issue.

17 MR. ISAACSON: I'm through at least the first 50 of
18 them.

19 THE COURT: Okay.

20 MR. ISAACSON: So if I have an objection, I'll talk
21 about it with counsel at the break.

22 THE COURT: Go ahead.

23 MR. CRAMER: Thank you, Your Honor.

24 **DIRECT EXAMINATION**

25 BY MR. CRAMER:

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1 Q. Dr. Singer, good morning. How are you -- how are you today?

2 A. Good morning. I'm doing well.

3 Q. Great.

4 What's your educational background?

5 A. I have a Bachelor of Science in Economics from Tulane
6 University, and a Master's and a Ph.D. in Economics from Johns
7 Hopkins University.

8 Q. Since obtaining your Ph.D., have you taught economics?

9 A. Yes, I have. In the last five years I've been teaching
10 advanced pricing theory at the business school at Georgetown
11 University in Washington, D.C.

12 Q. Have you published any articles in economic journals or law
13 reviews?

14 A. Yes, I've published over 40 journals and law reviews and
15 economics journals.

16 Q. Have you published any books or book chapters?

17 A. I have published several --

18 THE COURT: Mr. Cramer, we can go on from the
19 background for Dr. Singer.

20 MR. CRAMER: Fair enough.

21 Your Honor, I wanted to show a slide of the various
22 cases that Dr. Singer testified in in which classes were
23 certified. Is that --

24 THE COURT: We don't need to do that.

25 MR. CRAMER: -- unnecessary?

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1 THE COURT: Yes, that's not necessary.

2 MR. CRAMER: Okay.

3 THE COURT: Because you've already told me that anyway.

4 MR. CRAMER: Fair enough.

5 BY MR. CRAMER:

6 Q. Dr. Singer, when were you first retained to work on this
7 case?

8 A. In 2014.

9 Q. So you've been working on this case for five years. How
10 many reports have you submitted in this case?

11 A. I've submitted four reports: my initial report, a rebuttal
12 report, a supplemental, and a supplemental reply.

13 Q. Approximately how many hours have you and your staff spent
14 on this case?

15 A. My staff and I have spent over 5,000 hours on this case.

16 Q. Approximately how many depositions have you reviewed from
17 the record in this case?

18 A. I personally reviewed roughly 20 depositions. My staff has
19 reviewed many more than that.

20 Q. And did you have access to the entire discovery record in
21 this case?

22 A. Yes.

23 Q. How did your staff determine which documents to look at?

24 A. Well, for certain documents we were able to search what was
25 produced in discovery by search terms. Like, for example, if I

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1 was interested in finding record evidence that spoke to entry
2 barriers, we could search the discovery database for entry
3 barriers.

4 For other documents, like the fighter contracts, there
5 were thousands of which, we had to review those manually.

6 Q. Let's talk about data. Did you have access to data from
7 both Zuffa and third parties?

8 A. Yes.

9 Q. What kind of data did you have access to?

10 A. Well, from Zuffa we had very granular data on the
11 compensation of every fighter and every event. And we also had
12 the event revenues. We had what are called event P&Ls, which
13 told us profit and loss statements, which told us how much money
14 was generated, the sources of the revenue generation, how much
15 expenditures were incurred, and the sources of those
16 expenditures.

17 And then I think your question was two part. Outside
18 of Zuffa, we were able to obtain a lot of data as well,
19 including from third-party vendors that track the industry.
20 We'll talk about FightMatrix and FightMetric. Horrible,
21 horrible. And Sure Dog.

22 But, yes, there were multiple sources of data that we
23 were -- we were able to glean from outside of the record as
24 well.

25 Q. Did you also review -- I think you mentioned the fighter

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1 contracts. Did you review the fighter contracts in this case?

2 **A.** That's right. My -- it was the very --

3 THE COURT: Mr. Cramer, you don't need to go through
4 that. He obviously reviewed them. I mean, you looked through
5 it. His report goes through, essentially, all of the clauses
6 and the effect of the clauses. There's a chart about the
7 clauses and exclusivity period. So we don't need to go through
8 that.

9 MR. CRAMER: I hear you. All right.

10 BY MR. CRAMER:

11 Q. So, Dr. Singer, and Your Honor, we're going to focus mainly
12 on plaintiffs' bout class. We will have some discussion of the
13 identity class, but we're going to take a lead from Your Honor
14 and focus on the bout class. Is that acceptable, Dr. Singer?

15 **A.** Acceptable to me.

16 Q. Okay. I have a slide. Is this the definition of the bout
17 class that you were working with in this case?

18 **A.** That's right. All persons who competed in one or more live
19 professional UFC-promoted MMA bouts that took place or were
20 broadcast in the United States from December 16, 2010, to
21 June 30, 2017.

22 THE COURT: And, Dr. Singer, were you given that date,
23 the December 16, 2010, date?

24 THE WITNESS: I was.

25 THE COURT: Or was that a date that you picked?

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1 THE WITNESS: I was given that date.

2 THE COURT: Okay.

3 BY MR. CRAMER:

4 Q. When was the Strikeforce buyout?

5 THE COURT: Thank you. That was going to my next
6 question.

7 It seems to me a lot of the effects of the report,
8 really, from your estimation, start to take off with the
9 purchase of Strikeforce. I mean, particularly as it relates to
10 the issues regarding the supply of fighters and bringing
11 fighters over and being able to control the relevant input
12 markets and submarkets there. It seems to me that the
13 Strikeforce purchase sort of was the culmination of a series of
14 purchases, but that was a significant purchase. And we see
15 differences in effects after that.

16 Why wouldn't that be an appropriate date to sort of set
17 the more, let's say, robust findings, particularly as relates to
18 market share from the model?

19 THE WITNESS: I think it's reasonable. If you're
20 asking me -- this is typically a question beyond what I get
21 asked, but I think that the difference between December 2010 and
22 March of 2011, which is the date of the Strikeforce, I don't
23 think much happened in the interim that would change my opinions
24 in any way as to whether the conduct was anticompetitive.

25 THE COURT: But you would agree that with -- with the

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1 acquisition of Strikeforce that substantially impacted the --
2 the ability of Zuffa to control market shares as relates to, in
3 particular, the supply of fighters?

4 THE WITNESS: It was a monumental event, no doubt.

5 THE COURT: Okay. Because I'm just saying, again, it
6 seems to me as relates to the effect that you describe that the
7 Strikeforce -- because it's close in time, but the Strikeforce
8 acquisition would be substantive. Because I'm trying to figure
9 out what would be the appropriate dates. I know you didn't
10 choose December 16, 2010. So you're trying to be, I think,
11 probably somewhat careful about being critical of the choice of
12 the date, but it does seem to me that the Strikeforce date would
13 be a more natural choice for the effects that you describe.

14 Would you agree with that?

15 THE WITNESS: It could be more natural. I could --
16 yes, I could be persuaded.

17 THE COURT: Okay.

18 Go ahead, Mr. Cramer.

19 MR. CRAMER: Your Honor, just so you understand. We
20 chose December 2010 because that was exactly four years before
21 we filed the complaint, and that's the statute of limitations --

22 THE COURT: That's what I thought, too.

23 MR. CRAMER: -- in antitrust cases.

24 THE COURT: And, again, and that's a standard practice,
25 obviously, for lawyers. But, again, it does seem to me, in

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1 looking at the background material, that the Strikeforce
2 purchase was significant and huge, given what you described as
3 the exclusivity, and particularly regarding the fighters and the
4 number of fighters.

5 THE WITNESS: Just one consideration, I think it's
6 worth mentioning, is that, of course, to the extent there were
7 underpayments to the fighters during those three or four
8 intervening months that are being taken away, and those
9 underpayments can be directly attributable to the challenged
10 conduct.

11 THE COURT: Right.

12 THE WITNESS: And trimming that off does have impact.
13 I mean, it does affect people who are potentially injured.

14 THE COURT: No, certainly.

15 THE WITNESS: Okay.

16 THE COURT: I appreciate that. Thank you.

17 Go ahead, Mr. Cramer.

18 BY MR. CRAMER:

19 Q. Aside from this point that you just made, Dr. Singer, about
20 the fighters that may only have fought during the period between
21 December 2010 and March 2011, if we moved the beginning of the
22 class period to March 2011, would that materially change any of
23 your findings or opinions in this case?

24 A. No.

25 Q. Okay. In broad terms, what do you understand the conduct

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1 that plaintiffs are challenging in this case --

2 **A.** Sure.

3 **Q.** -- to be?

4 **A.** In broad terms, the conduct that is being challenged --

5 THE COURT: Okay. We don't -- I don't need that. I
6 mean, because I understand it in broad terms. I understand it
7 in, actually, even more detailed terms. I would rather focus on
8 getting the benefit of Dr. Singer's knowledge as relates to his
9 particular modelling.

10 So what would be helpful, Mr. Cramer, would be to start
11 with the -- just because I do think it's important to go through
12 what are the identifiable markets and build upon that in terms
13 of the industry. Because I do think the background part of the
14 report, at least the initial report, talks about that.

15 Because I understand what the overall allegation is as
16 relates to the antitrust injury and how that's broken down, but
17 I think it's worthwhile to at least do some background as
18 relates to the industry and the markets and build up from there.

19 MR. CRAMER: Your Honor, I appreciate -- I appreciate
20 that, and we will do that.

21 One of the things we do next is frame the dispute
22 between Dr. Singer and Dr. Topel, and the difference between
23 wage share and wage level.

24 THE COURT: Okay. Go ahead, if you --

25 MR. CRAMER: I think that that is a fundamental issue,

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1 and we're going to get right to that right now.

2 BY MR. CRAMER:

3 Q. So, Dr. Singer, Dr. Topel, you know, says -- he disputes
4 pretty much all of your conclusions. But are there any key
5 agreements between you and Dr. Topel in this case?

6 A. There are.

7 Q. And did you put those on a slide?

8 A. I did.

9 The key agreement is that there are two phenomena
10 occurring at the same time, and I think the bone of contention
11 is whether they're related and whether there's an
12 anticompetitive story there or procompetitive story.

13 But we both agree that over the period of study inquiry
14 that the wage share, that is, the fraction of event revenues
15 that Zuffa's paying its fighters, is falling over time. So to
16 give you an idea, in 2007 Zuffa thinks it was on the order of
17 about 26 percent, and then it falls into the -- into the 20s and
18 20s, and goes down into 18 and 19 percent at some point in the
19 class period, and hovers right around 20.

20 THE COURT: Around 5 percent.

21 THE WITNESS: Right? Right. And so 26 to 19 or 26 to
22 20 is a big decline in percentage point terms. It's a big
23 decline in percent terms. And I think we both agree that that's
24 happening in the background over the study period.

25 At the same time, we both agree that as the study

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1 period unfolds, more and more fighters are being drawn into the
2 web and locked into these long-term exclusive contracts. And
3 I'm going to refer to that as the foreclosure share. I think in
4 the slide here, Dr. Topel refers to it in more colloquial terms,
5 but I think he's getting to the same thing, the share of MMA
6 fighters under contract rose while compensation as a share of
7 event revenue declined.

8 BY MR. CRAMER:

9 Q. All right. Thank you.

10 So you've explained this key agreement. Do you and
11 Dr. Topel agree on the underlying economic explanation for why
12 wage share was falling as foreclosure share was rising?

13 A. No, we do not.

14 Q. Okay. So have you prepared a slide summarizing the key
15 dispute between you and Dr. Topel on the merits of this case?

16 A. Yes.

17 Q. All right. What does this slide depict?

18 A. So the way that I view these two phenomena, this falling
19 wage share occurring with the rise in foreclosure, is that
20 there's a causal connection. It's an anticompetitive story.
21 And there's a very straightforward story as to why that can be
22 happening. As Zuffa is removing outside employment
23 opportunities for its fighters, either by taking away these
24 rival promotions via acquisition or via locking up the fighters
25 to long-term exclusive contracts, it is increasing their ability

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1 to exploit the workers, to push down -- to create a wedge
2 between what they pay the workers on the one hand and what the
3 workers are contributing to revenues on the other. That's the
4 exercise of monopsony. That's the anticompetitive story.

5 Dr. Topel sees the conduct as being procompetitive.
6 And, in particular, the story that he seeks to tell in the
7 alternative is that -- is that wage share was falling because
8 Zuffa was making contributions to revenue that grew at a faster
9 clip than were the contributions being made by the fighters.
10 And his opinion --

11 THE COURT: And how do you see that he actually defines
12 what that means in terms of how they can contributed to that?
13 I'm going to ask him that question. I'm going to ask other
14 questions about it. But what is your understanding of the
15 modelling that he used to try to capture that alleged -- I mean,
16 procompetitive is a legal term. Right. Essentially, what
17 you're talking about is sort of Zuffa's marginal sort of
18 contribution to sort of the increase in the revenue based upon
19 its own conduct --

20 THE WITNESS: Right.

21 THE COURT: -- apart from its, quote/unquote, exclusive
22 or other anticompetitive conduct.

23 THE WITNESS: So for a very long time we were in the
24 dark as to what he was talking about, which is why I used the
25 phrase "special sauce."

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1 THE COURT: Right.

2 THE WITNESS: So for, say, one, two, and report three,
3 we couldn't tell what he was talking about other than there was
4 something magical, like a black box. We couldn't -- we couldn't
5 identify what it was, but Zuffa was bringing something special
6 to the table.

7 And by the time he got to report number 4, he finally
8 came around to identifying and committing to what he meant by
9 the special sauce, and it was the promotions, right. It was
10 that they were -- they were producing quality promotions and
11 they were investing in promotions. And so I said, Okay, let's
12 explicitly control for promotional expenditures as a new
13 variable on the right-hand side of regression.

14 MR. ISAACSON: Your Honor -- Your Honor, he's now
15 discussing report 4 where he -- where he did a new regression
16 that was contrary to the parties' agreement to the Court. So I
17 don't want him to go into the -- his -- the regression from
18 Singer's -- Dr. Singer's last report.

19 THE COURT: Okay. So, perhaps, maybe we could --
20 Just give me a moment, Dr. Singer.

21 When you're talking about the parties' agreement, I'm
22 not sure what it is, Mr. Isaacson, you're talking about as
23 relates to what I've ordered. Because it doesn't -- quite
24 honestly, I'm not sure it matters what the parties agreed to if
25 it's something that I could legitimately consider. Explain to

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1 me why I wouldn't consider that.

2 Now, honestly, I don't know that he's gone into that
3 other than to say he didn't understand what it was until the
4 very end, but maybe you could give me some -- remind me of what
5 the issue is here.

6 MR. ISAACSON: I don't think he's gotten into it yet,
7 but I didn't want --

8 THE COURT: Okay.

9 MR. ISAACSON: -- I didn't want him to.

10 There's -- in the last report, which we haven't had a
11 chance to respond to, there was a new regression from
12 Dr. Singer. That's the simple point.

13 THE COURT: Okay.

14 MR. CRAMER: Your Honor, Mr. Isaacson is mistaken. The
15 regression that Dr. Singer is turning -- talking about right now
16 in which he controlled for promotional spending, is in his third
17 report.

18 THE COURT: That's what I thought, too. So I'm
19 confused.

20 MR. CRAMER: The regression analysis that Mr. Isaacson
21 is referring to, I think, is what -- what happened is in
22 response to the regression that Dr. Singer ran in which he
23 controlled for promotional expenditures, he put a variable in
24 the model. Let's see what happens to promotional expenditures.
25 Let's put that variable in and see if it changes the result. It

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1 doesn't change the result.

2 In response, in -- in Dr. Topel's next report, because
3 they did not stop filing reports, they kept filing them,
4 Dr. Topel said, No, no, no, it's not promotion. You have to put
5 in a variable that includes all non-fighter related Zuffa
6 expenses, from the money they spend on jets to everything else
7 they spend. You have to put that variable in.

8 So in response, Dr. Singer said -- and so then
9 Dr. Topel ran that regression with this new variable in his next
10 report. And all Dr. Singer did in response was not run a new
11 regression; he just pointed out that Dr. Topel screwed up. That
12 Dr. Topel omitted data. And all Dr. Singer said was if you take
13 out the omitted data, or you put in the complete data set, which
14 was available, that's not a new regression. He just said
15 Dr. Topel screwed up. And if you correct the error, then the
16 regression works still.

17 So what Dr. Singer's able to show with the regression
18 with promotion, you put promotion in, foreclosure share
19 raises --

20 MR. ISAACSON: So this is our concern. Because we
21 don't agree with that description, and I don't think you want to
22 air out those differences.

23 THE COURT: What I want to figure out is to what extent
24 I should or shouldn't be considering it here. So if there's --
25 and I don't recall ruling that I was excluding reports,

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1 Mr. Isaacson, so I'm a little confused about the fact that I
2 wouldn't consider it.

3 MR. ISAACSON: This goes -- you have not ruled on this
4 issue. What there was was a joint motion to supplement expert
5 reports, which is Document 545 on the docket --

6 THE COURT: Okay. All right.

7 MR. ISAACSON: -- docket, in which the parties agreed
8 on the guidelines for what was going to happen in the last
9 reports. And there's no question that he runs a new regression
10 with different data. We disagree with the descriptions. The
11 lawyers can argue this back and forth.

12 But there is a regression that we disagree with that we
13 have not had the opportunity to respond to. Everything he's
14 saying we haven't had the opportunity to respond to.

15 And -- and the joint motion was intended to avoid
16 precisely this situation.

17 THE COURT: This back and forth.

18 MR. ISAACSON: Right.

19 MR. CRAMER: Your Honor, the plaintiffs' --

20 MR. ISAACSON: And that's paragraph 4.

21 THE COURT: Hold on. Let me just get to the -- the
22 joint motion is 5?

23 MR. ISAACSON: Docket 545.

24 And I want to point out one other thing. We are now to
25 the point of rebuttal.

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1 The -- what's -- the groundwork that's being laid is
2 that Dr. Topel, in his third report, has said something in
3 response to the first reports, and now here's our response to
4 that.

5 And all of a sudden -- and this witness has the
6 opportunity to come back for rebuttal after Dr. Topel testifies.
7 So one of -- I don't know why we're doing this now.

8 THE COURT: Because it's helpful to me to do it now.

9 MR. ISAACSON: Well, okay. All right.

10 But the --

11 THE COURT: So if you want to do that with your
12 witnesses, Mr. Isaacson, your expert, and if you want to have
13 your expert comment on the last plaintiffs' report and prepare
14 Dr. Topel for that, you can do that. Because even if I decided
15 the joint motion, I suspect there would still be further expert
16 supplements anyway, in my experience, in these cases.

17 But to the extent that you feel there is an appropriate
18 rebuttal to what Dr. Singer testifies to, I will give you broad
19 latitude through your expert to be able to ask Dr. Topel about
20 it. If you want to provide even a supplement, so long as you
21 show it to the plaintiffs, I will let you do that. If there is
22 something beyond what's been attached and you want to add
23 something since you haven't had the last word, I will consider
24 that as well.

25 So I don't want you to feel limited in that way, but,

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1 again, even -- even in deciding the motion, I think there's
2 always going to be a back and forth. And that's fine. I don't
3 have to decide this to the finality. I mean, obviously --

4 MR. ISAACSON: Right.

5 THE COURT: -- I have to decide it up to a certain
6 point. But if you feel that somehow, Mr. Isaacson, you want to
7 supplement the record, I will let you do that.

8 MR. ISAACSON: I just wanted -- depending on where they
9 go with this, that actually will mean us sending over new
10 regression results, adjusting his last regression. And --

11 THE COURT: That's fine.

12 MR. ISAACSON: Okay.

13 THE COURT: Look, this is going to take a little bit of
14 time. I mean, in part, this is the standard, which I think is
15 appropriate. You have also said the Court has go through a
16 rigorous analysis. That's what we're going to do. And if that
17 means -- look, we're going to do this over the course of several
18 weeks. If we have to bring people back, we'll bring people
19 back. But I want to make sure everyone feels they have an
20 opportunity to be heard. I will let you supplement to the
21 extent you think it's appropriate. Both sides can.

22 MR. ISAACSON: Okay. Thank you, Your Honor.

23 THE COURT: Of course.

24 MR. CRAMER: Thank you, Your Honor. And I take your
25 last comment to mean that if Zuffa supplements, that we get the

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1 opportunity to respond.

2 THE COURT: Yes. At some point we have to cut it off,
3 but yes.

4 MR. CRAMER: Plaintiffs -- we are -- we get the last
5 word; it's our motion. So what kept happening here --

6 THE COURT: Well, you get the last word until I say the
7 last word is heard.

8 MR. CRAMER: Well, Your Honor, then gets the last word.

9 THE COURT: But -- I'm joking. But at some point we do
10 have to cut it off. I do think that -- this is not a jury trial
11 or a bench trial. The standard is not that I have to be
12 persuaded as to the credibility with respect to the modelling.
13 The standard is lower than that, from my standpoint, in terms of
14 looking at the Supreme Court's decision and the Ninth Circuit's
15 recent decision, but it does require some rigorous analysis as
16 relates to the foundational aspects to the modelling, which I
17 think the Court needs to address.

18 So with that, I'll let you continue.

19 MR. CRAMER: Thank you, Your Honor. And we agree with
20 your last statement.

21 BY MR. CRAMER:

22 Q. All right. Let's get back to this issue of special sauce.
23 I just want to make sure you've described -- you were in the
24 middle of sort of describing the special sauce, whether you can
25 complete your testimony on that point.

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1 **A.** Sure. What we -- what we need to do to upset the findings
2 of my model, which is that there's a statistically significant
3 relationship between foreclosure share on the one hand and wage
4 share on the other, is to identify some variable that my model
5 omitted, that when brought into the regression, upsets that
6 relationship. That's -- that's kind of the game. That's the
7 ball game.

8 And Dr. Topel has had four or five reports to come up
9 with this variable that captures the magical special sauce that
10 Zuffa's contributing. And he has yet to identify it.

11 And so as I --

12 THE COURT: What's the most determinative variability
13 that his modelling captures?

14 THE WITNESS: These additional variables -- I'm --
15 sitting here, I'm hard-pressed to remember if they add any
16 incremental explanatory part, but the key is they do not
17 upset -- they do not upset the statistically significant finding
18 between foreclosure share and wage share.

19 To me -- I mean, this follows right on high tech
20 antitrust litigation, but this is -- to me, this is the fight
21 that the econometricians are having is can you come up with one.
22 And he didn't here.

23 THE COURT: Okay. Thank you. Go ahead.

24 MR. CRAMER: All right. Thank you, Your Honor.

25 BY MR. CRAMER:

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1 Q. Dr. Singer, have you prepared a slide explaining at a very
2 high level the basis for your opinion that Dr. Topel is wrong
3 and you are correct?

4 A. I did.

5 Q. All right. What does this slide depict?

6 A. What Dr. Topel's special sauce theory is missing, is that
7 when it comes to this particular application, this particular
8 industry, the MMA industry, and sports in general, but MMA in
9 particular, the athletes are the product. Right. And what that
10 means is that while there are other contributions to revenues, I
11 don't dispute that, the athletes are the main drivers of
12 these -- of these revenue gains.

13 THE COURT: In other words, based upon your finding,
14 whether it's UFC, Zuffa, Strikeforce, Bellator, WFA, WAE,
15 whatever, ABC, it's less relevant than, you know, if it's Conor
16 McGregor or Rampage or whoever the person is, that people
17 actually pay to see either through Pay-Per-View or live event
18 ticketing?

19 THE WITNESS: I just want to say back in my words, and
20 let's see if we're on the same page, hopefully. It's the
21 fighters. It's the identities of the fighters --

22 THE COURT: Yes, it's the identity of the fighters that
23 drives --

24 THE WITNESS: -- putting butts in the chair.

25 (Court reporter interruption.)

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1 THE WITNESS: Oh, sorry.

2 THE COURT: So the identity of the fighters -- in other
3 words, the fact that a particular fighter is known to be
4 associated with a particular UFC event, from your analysis, is
5 more significant than being associated with the UFC versus
6 Bellator or another promoter.

7 THE WITNESS: Yes, Your Honor. In fact, there's a
8 published paper that establishes that exact point.

9 THE COURT: That's not your paper, though, right? It's
10 someone else's.

11 THE WITNESS: Someone else's.

12 THE COURT: No, no. But it's quoted in your report.

13 THE WITNESS: Yes.

14 THE COURT: It talks about --

15 THE WITNESS: Man and -- yes, right.

16 THE COURT: -- it talks about the percentage that
17 certain fighters capture the --

18 THE WITNESS: Right.

19 THE COURT: -- that drive the revenue.

20 THE WITNESS: Right.

21 MR. CRAMER: Your Honor, I put up on the screen
22 slide 68, which is -- I think, is the article Your Honor and
23 Dr. Singer are talking about.

24 BY MR. CRAMER:

25 Q. Dr. Singer, would you like to explain what this article is

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1 talking about?

2 **A.** Sure. So these -- these economists tested this hypothesis
3 explicitly. Is it the fighters or is it the belts? And just
4 the conclusion is fairly obvious where they came down. The most
5 important take-away is that the identity of the fighters
6 competing matter more than any title. The fighters themselves,
7 not the UFC titles, are what truly drive Pay-Per-View buy rates.

8 And, in fact, I supplemented this analysis with my own
9 original empiricism, and I found that knowing the rank of the
10 highest ranked fighter who was profiled in the event was very
11 helpful in predicting what the event revenues were.

12 Q. All right. Dr. Singer, we'll go in the special sauce in
13 even more detail later. I just want to be clear. Did you
14 assume that Zuffa's ability to pay a lower share of event
15 revenues to fighters over time was the result of Zuffa's
16 allegedly anticompetitive conduct?

17 **A.** No, I did not assume that. I posited a hypothesis, which is
18 that as Zuffa could ensnare more and more of these highly ranked
19 marquee fighters into this web of long-term exclusive contracts,
20 that it would give Zuffa the ability to push down the wage
21 share.

22 But I did in no way assume that conclusion. I tested
23 it empirically and found that --

24 THE COURT: How?

25 THE WITNESS: -- to be the case.

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1 THE COURT: How did you test it?

2 THE WITNESS: Through the regression analysis. The
3 hypothesis that -- that we tested was could we explain variation
4 in wage share across events and across fighters with knowledge
5 of, at the time that the fight took place, how many fighters had
6 been sewn up or taken out of the market via Zuffa's exclusionary
7 long-term contracts.

8 We tested that and we tried to control for as many
9 other things that could be also explaining contributing to
10 variation in the dependent variable.

11 THE COURT: But did you control for differences in
12 promoters?

13 THE WITNESS: We did. When --

14 THE COURT: Well, I mean, because there's only a
15 certain period of time in which you could probably do that,
16 realistically, because after 2011 most of the headliners are
17 certainly under the UFC's umbrella. But before that, I think
18 you have, and your report talks about, a fair number of the
19 headliners who were actually outside of the Zuffa camp.

20 Is there an analysis -- because I'm not sure that I saw
21 that part and maybe you can point it to me in the analysis that
22 talks about that particular difference that would address this,
23 quote/unquote, special sauce that you did?

24 THE WITNESS: Sure, there's one iteration of the
25 regression that combines two databases.

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1 THE COURT: Can you tell me where I can find that? I
2 just want to make sure we're talking about the same thing.

3 THE WITNESS: Sure. It would be in my initial report.
4 I think my first model in the report incorporated the
5 Strikeforce compensation.

6 THE COURT: Right.

7 THE WITNESS: So I had -- I had --

8 THE COURT: Hold on just a second.

9 THE WITNESS: Oh, sorry.

10 THE COURT: Can we find that? Because I want to make
11 sure -- again -- and I'll just say this for all parties, because
12 it will be helpful to me, whenever you're referencing, because
13 there's so many reports and regression analyses, I always want
14 to make sure we're talking about the same analysis. So whenever
15 that's referenced, Dr. Singer, Mr. Cramer, Mr. Isaacson, it's
16 always helpful for me that we reference the particular
17 regression analysis and the results.

18 So let's see if we can find that. Because I think I
19 know what part of -- in your initial report I recall this, but I
20 just wanted to make sure. And, of course, I'm sure you don't
21 have the page numbers memorized, and so let's see if we can't
22 find it.

23 Mr. Cramer, are you looking?

24 MR. CRAMER: I am looking, Your Honor, for the
25 discussion of the Strikeforce version of the model, and ...

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1 (Plaintiffs' counsel conferring.)

2 THE COURT: Here we go. I think the explanation starts
3 on page 121, but I'm not sure of the report. And then we
4 have ...

5 MR. CRAMER: In the rebuttal it goes into detail
6 about -- because Dr. Topel challenged the use of the Strikeforce
7 data in the model, and so the rebuttal has a detailed defense.

8 THE COURT: Right. But the results first appear in the
9 first report, I think.

10 MR. CRAMER: That's correct. That's correct. And I
11 believe --

12 THE COURT: I think it's 123, and then -- oh, here it
13 is. So can you pull up the 125 -- page 125, I think, and 126, I
14 believe are the results.

15 Is there a way to --

16 At least from my notes, I think that's what we're
17 looking at.

18 MR. CRAMER: Yeah, I mean, the discussion -- there's a
19 discussion in paragraph 181 on page 119 that --

20 THE COURT: Yes, but I want him to look at -- I think
21 the results from the analyses are on the charts, 125 and 126. I
22 just want to make sure I understand which term we're talking
23 about.

24 (Court conferring with courtroom administrator.)

25 MR. CRAMER: Your Honor, may I approach the witness?

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1 THE COURT: Yes.

2 THE WITNESS: I also don't feel I got a chance to
3 complete the answer, and I think it's going to help understand
4 this.

5 THE COURT: Okay.

6 THE WITNESS: Sure, sure. But let me -- despite --

7 THE COURT: So what we're going to do is --

8 Hold on just a second.

9 What we're going to do is, I'm also going -- we're
10 going to have you, Mr. Cramer, pull that out and put that on the
11 ELMO there, and then we can switch over so we can all be talking
12 about the same thing.

13 But go ahead. While he's doing that, Dr. Singer, if
14 you want to finish your answer.

15 THE WITNESS: So you asked was I able to control for
16 the identity of the promotion, and the answer is yes. But I
17 only had to do that in the model that combined the Strikeforce
18 data with the Zuffa data. So we only got detailed fighter
19 compensation and event revenue from two promotions, Strikeforce
20 before it was acquired and Zuffa over a very, very long time
21 period.

22 In this first model that I -- that I run, I combine the
23 Strikeforce data, right, so I have observations for every event.
24 I know how much the Strikeforce fighter got paid, down to every
25 component, and I also know what the event revenue was for

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1 that -- for that Strikeforce event. Right. And I'm going to --
2 and I combine it with the Zuffa data, same type of data, right.
3 And I use a dummy variable that captures whether or not the data
4 that I'm looking at is coming from Strikeforce or Zuffa.

5 And I find that when you control for all things that
6 could possibly move the wage share around, that the foreclosure
7 share is highly statistically significant.

8 Now, let me -- let me just say I use another model that
9 does not rely at all on the Strikeforce database. Right. It
10 purely relies on the Zuffa data. And what that means is I'm --
11 I basically have one arm tied behind my back in terms of what
12 can now contribute to explaining --

13 THE COURT: Right.

14 THE WITNESS: -- the foreclosure variable. The only
15 source of variation that's left when you remove the Strikeforce
16 data is what we call time series variation, right, within Zuffa.
17 What we observe within Zuffa, going back again to, say, 2005
18 when the database begins, is we see that when Zuffa didn't have
19 as many fighters locked up under these long-term exclusive
20 contracts, they were paying their fighters a higher wage share.

21 So this second model, that we're in fact going to
22 present today, makes no use of the Strikeforce data, right.
23 And, therefore, there's only one potential contribution source
24 to explain the foreclosure variable. It's this time series
25 variation within Zuffa. And even that one, even that model

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1 without any Strikeforce data, is able to show a statistical -- a
2 statistically significant relationship between the foreclosure
3 share and the wage share.

4 And, of course, when we bring the Strikeforce data back
5 in, we get the same result, but the coefficient is even larger
6 in this case because, of course, now we have two sources of
7 contribution.

8 THE COURT: Which coefficient is larger?

9 THE WITNESS: Oh, the foreclosure share coefficient is
10 larger.

11 And the reason is, Your Honor, is that we now have two
12 things that are contributing to that variable; not only this
13 time series variation of what's going on within Zuffa across
14 time, but also a cross-sectional variation. Now, how
15 Strikeforce is paying its fighters compared to how Zuffa is
16 paying its fighters across different points in time.

17 BY MR. CRAMER:

18 Q. Dr. Singer, when you said the coefficient on the foreclosure
19 share variable is higher in the Strikeforce model, what exactly
20 do you mean by that?

21 A. Well, it's a bigger effect. That means a -- for the same
22 size change in foreclosure share, you get a -- you get a larger
23 effect on the wage share. And so it's no -- it's no surprise --

24 THE COURT: It is a greater predictive effect on the
25 outcome.

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1 THE WITNESS: Well, the predictive powers is high in
2 both models, but the magnitude of the effect is bigger when you
3 include the Strikeforce data. I mean -- and, of course, because
4 my damages estimate turns on the size -- largely on the size of
5 that parameter, you get larger damages, of course, when you --
6 when you include the Strikeforce data.

7 THE COURT: Okay.

8 BY MR. CRAMER:

9 Q. Dr. Singer, on page 126 of your report, this lists -- this
10 is Table 6, and it lists or identifies the regression that
11 you've just described with the Strikeforce information.

12 I just want to draw your attention to the notes at the
13 bottom and you'll see, of the various fixed effects variables
14 that are being controlled for, one of them is promoter. Is that
15 right?

16 A. You want me to look at the notes under the table?

17 Q. Correct.

18 A. Okay. Give me a second.

19 THE COURT: Why don't we just look at the variable?
20 Where is the variable you're talking about?

21 THE WITNESS: Because the fixed -- because the fixed
22 effects are suppressed in the tables, so they'll only show up by
23 name --

24 MR. CRAMER: There are hundreds of fixed effects
25 variables, so you couldn't list them all.

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1 THE COURT: I thought he had said that he had listed in
2 the chart --

3 I thought you said you listed the promoter variable in
4 the chart that you have with the fighters share analysis.

5 THE WITNESS: Right. And so in the notes, it turns
6 out, we did -- we did control for it. But the coefficient on
7 the promoter dummy is not listed in the table.

8 THE COURT: Ah, that's what I was looking for.

9 THE WITNESS: But we did. If you look in the notes --

10 THE COURT: No, I see that. Okay. So that's why I was
11 looking at the charts. You were saying -- because I see, for
12 example, gender is listed and other things that are identified
13 in those, but the promoter variable isn't listed here.

14 THE WITNESS: It's not listed, but if you were really
15 interested in the coefficient on it, we could generate that.
16 It's generated in the backup, of course.

17 THE COURT: Okay.

18 THE WITNESS: But the long --

19 THE COURT: Well, I would actually be -- I mean,
20 because it's actually relevant to potentially the overall
21 analysis.

22 It would be helpful, Mr. Cramer --

23 MR. CRAMER: Yeah.

24 THE COURT: -- to see what the actual coefficient is,
25 because that actually matters, obviously.

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1 THE WITNESS: Sure.

2 THE COURT: Right. So, I mean, the size of it in
3 comparison to the others and the statistical significance in
4 comparison to the others, obviously, is something that the Court
5 has to consider since that's basically -- at least what you're
6 saying is their whole argument, is that this variable actually
7 is -- captures, as you call it, the special or secret sauce with
8 respect to the sort of increase in the revenue.

9 THE WITNESS: It's definitely related to the special
10 sauce. Yes, that is true. That's true. But -- yes. I'll
11 leave it at that.

12 THE COURT: No, again, because I just want to be able
13 to then consider that in the overall context of the chart of
14 the -- of the different factors in the coefficients that are
15 there. But we can -- we can do that later.

16 Why don't you go ahead, Mr. Cramer.

17 MR. CRAMER: Just, Your Honor, this is Dr. Singer's
18 supplemental expert report, paragraph 31, and I just want to
19 put --

20 THE COURT: Which? Is that the first supplemental
21 report, the second, or third?

22 MR. CRAMER: Correct. The first supplemental report.

23 THE COURT: Okay.

24 MR. CRAMER: Yes, I don't have the exhibit number.

25 THE COURT: That's all right. Just identify the --

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1 which supplemental report it is. I think everyone understands
2 that.

3 BY MR. CRAMER:

4 Q. This is page 23, paragraph 31, and you'll note it says:
5 Third, my analysis includes fixed effects by promoter. This
6 controls for the possibility that Zuffa has a superior
7 promotional acumen and, therefore, captures a greater share of
8 event revenue than other promoters.

9 A. And it also describes -- if I may, it also describes that
10 the coefficient's negative and explains the economic
11 interpretation of that coefficient.

12 Q. And when you say the coefficient is negative, Dr. Singer,
13 please explain what that means.

14 A. What it's telling you is that the wage share is
15 significantly lower at the UFC relative to other promoters in
16 the database. That's not a surprise. But the key thing,
17 though, is that we're feeding -- for this model, we're feeding
18 data from two different -- two different databases. And we
19 certainly want to let the model know that when it comes from
20 database A, that it's coming from the database A, and when it's
21 coming from database B, we control for that.

22 But what's critical and probably the biggest takeaway
23 is that while I think it's appropriate to combine the two
24 databases, because economists like data, we -- you know, when I
25 get a database, it gets us excited, and so we want to make use

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1 of it. But what's really important is that even when you strip
2 out the Strikeforce data, there's valuable information that's
3 being lost when you do that. Right. Even when you strip it
4 out, the model, when run exclusively on the Zuffa database,
5 tells you the same thing. That is, there is still a
6 statistically significant relationship between the foreclosure
7 share on the one hand and the wage share on the other.

8 Q. All right. And we're going to get back to some of that
9 later after we build some of these building blocks, but I think
10 that was helpful.

11 MR. CRAMER: If we could put the slide deck back on the
12 screen, I would appreciate it.

13 BY MR. CRAMER:

14 Q. All right. Just one last question right now about the
15 special sauce theory. And I believe you've testified about it,
16 but I just want to make sure it's clear. Did you test
17 empirically Zuffa's procompetitive special sauce theory?

18 A. Yes, I did.

19 Q. And how did you do that?

20 A. I did it two ways. Initially -- I'd like to say, I already
21 had done it in the model. We just saw that we had a -- we had a
22 Zuffa promotional dummy, but we also had time trends, which
23 could have captured greater contributions that Zuffa was making
24 over time. We had year fixed effects. We even, as we noted,
25 added a promotional variable to see if the knowledge of Zuffa's

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1 promotion, how that -- how it grew over time could defeat or
2 undermine the relationship that we found between foreclosure
3 share and wage. That didn't work.

4 And, finally, we went with Dr. Topel's suggestion of
5 basically throwing in the kitchen sink, all non-fighter event
6 revenues that -- event expenditures that Zuffa incurred. We
7 used that as a potential control, and even when you include that
8 one. And I should note, just -- when you look -- and I think
9 we're going to have a slide eventually of what Zuffa's
10 promotional levels are doing over time, and when you look at
11 their non-fighter expenditures, including promotional but
12 including everything else, including the jets, they're just not
13 rising. They are rising, but they're not rising fast enough to
14 explain the explosion in event revenues.

15 THE COURT: Right.

16 THE WITNESS: Right. So we kind of knew -- we kind of
17 knew going in that putting that in on the right-hand side likely
18 wasn't going to upset the results, and it didn't.

19 What Dr. Topel needs to identify and what he hasn't
20 done -- and this is what's so hard. You have to find a variable
21 that's growing over time, right, that's capturing this
22 increasing contribution that Zuffa's making, but it also -- and
23 this is what makes it so hard. You have to conceive of a
24 contribution that Zuffa makes that doesn't simultaneously
25 increase the revenue productivity of the fighters. It's very

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1 hard to conceive of that.

2 I want to be open-minded and allow it to happen, but
3 every time they make an investment to promote a fight, they are
4 indirectly boosting the productivity of the fighter itself. And
5 so for them to come up with an explanation for why -- a
6 procompetitive story as to why wage share is falling, they have
7 to identify something that's making contributions. It's
8 growing -- and it's growing at a faster rate over time than are
9 the contributions that the fighters are making to event
10 revenues.

11 BY MR. CRAMER:

12 Q. And we're going to come back to that point, Dr. Singer.
13 Let's get some of the building blocks in here.

14 A. Okay.

15 Q. Before we do that, is there any analysis or evidence
16 relating to this central dispute between you and Dr. Topel that
17 varies by class member?

18 A. Of the wage share? Of the use of the wage share?

19 Q. Yes.

20 A. Oh, or --

21 Q. No, no.

22 A. Sorry. Procompetitive versus anticompetitive? I'm sorry.
23 No, there is nothing that's specific to any particular class
24 member. It's all common.

25 Q. Okay. Did Zuffa's economists dispute your use of wage share

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1 as the key lens of analysis in this case?

2 **A.** That's probably an understatement. Yes, they vehemently
3 opposed my use of the wage share.

4 **Q.** Okay. Is there something about the MMA industry that
5 suggests wage share and not wage level is the proper lens
6 through which the effect of the challenged conduct should be
7 assessed?

8 **A.** Yes, and it's something we mentioned before. It's that --
9 it's that in this industry, and in sports generally, but really,
10 it's really acute here, it's that the fighters are the product,
11 right. And so we know that when the fighters marginal revenue
12 product goes up, when their productivity goes up, it's going to
13 be associated with an increase in event revenue. There's going
14 to be some kind of a proportionality between their revenue
15 productivity and event revenues, given how important they are in
16 this industry. Right.

17 We also know that, of course, as they're -- as their
18 marginal revenue product goes up, there's a strong economic
19 theoretical connection between what they should be paid, their
20 compensation, right. If someone is more productive, economic
21 theory predicts, even by monopsonists, that the wage should go
22 up. There's this tight interconnection between the fighters'
23 marginal revenue productivity, event revenues, and wage share,
24 right.

25 And we also know that revenues are exploding over the

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1 study period, and the logical thing to do when faced with that
2 fact pattern, right, to control for all of these phenomena, is
3 to analyze the effect of the challenged conduct through the lens
4 of the wage share and not the wage level.

5 Q. Dr. Singer, you used the term "marginal revenue product."
6 Can you please describe what that is.

7 A. Sure. As the name suggests, it's at the margin. What is
8 the worker contributing in terms of revenue, right, with each --
9 with each incremental unit of effort that the worker employs.

10 Q. All right. We're going to have some examples of that. But
11 before we do that, if you had just looked at wage levels in this
12 case and not wage share, as Dr. Topel says you should have, and
13 Dr. Oyer as well, and Dr. Blair, would you have missed some
14 important features of the MMA industry?

15 A. Yes. You would have missed the fact that event revenues are
16 exploding over the study period. The event revenues in 2007, at
17 the time where I mentioned when wage share was at 26 percent,
18 was about \$200 million; but by the end of the class period, it
19 had tripled. It had gone over 600 million.

20 So to miss this phenomena, right, which is clearly
21 reflective of some increase in the productivity of the fighter,
22 who is the product, who is putting the butts in the chairs --
23 that's a technical economic term, right, you would -- you could
24 make an improper inference as to whether or not we're looking at
25 a competitive wage.

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1 Q. Can you give us an example that might illustrate the
2 importance of using wage share as opposed to focusing solely on
3 wage level.

4 A. Sure. I'll use an example from the NBA, since that's
5 something that I care passionately about. But we know that the
6 top level NBA players in the late 1980s were being paid around
7 \$2 million a year, which sounds staggering today. And we also
8 know that around that time that the industry or the league-wide
9 revenues were around a billion dollars. Okay. And it's no
10 surprise that, just like in MMA, and the NBA league revenues
11 have exploded. It's up around 8 billion dollars a year now. So
12 a 700 percent increase. Right.

13 And so if you looked at what that top player was being
14 paid in the late '80s, let's say was being paid 2 million, and
15 you used an approach of Dr. Topel's, which suggested he thinks
16 that under competitive conditions a doubling of revenue is
17 associated with an 8 percent increase in wages, you would -- you
18 would come to a conclusion that the top athlete today in the
19 NBA, like LeBron James, should be paid \$4 million a year.
20 Right.

21 But, clearly, that can't be a competitive wage when we
22 know that LeBron James is getting paid \$35 million a year. If
23 you paid LeBron James 4 million, the level of exploitation would
24 be massive. And we can infer that if LeBron James is getting
25 paid \$35 million a year, it must be the case that he's

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1 contributing in excess of 35 million. So paying him at
2 4 million would be -- would be grossly exploitative and
3 noncompetitive. It would not a competitive wage.

4 And that's the problem with ignoring the explosion in
5 revenues that are going on in the background.

6 Q. Dr. Singer, does economics have anything to say about
7 whether athletes or workers generally are receiving competitive
8 compensation?

9 A. Yes.

10 Q. And how -- what -- how does it frame that issue?

11 A. The way that it frames it is by looking at the wedge between
12 what an athlete or a worker is getting paid, the wage, and the
13 marginal revenue product, what is being generated for the firm
14 at the margin. Right. The bigger that wedge is, the bigger the
15 exploitation and the bigger exercise of monopsony power.

16 Q. If you observed a firm paying its workers significantly less
17 than the amount of revenues they're generating, their marginal
18 revenue product, what would that mean, as an economist?

19 A. It would mean that the firm in question is exercising a
20 certain degree of monopsony power.

21 Q. The last few statements you made about competitive wages,
22 MRP, monopsony power, is any of that controversial in the field
23 of economics?

24 A. No. This is the basic building blocks of labor economics.

25 Q. Did you prepare some slides illustrating the concept of

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1 marginal revenue product as used by economists?

2 **A.** I did.

3 *Q.* All right. What is this slide depicting?

4 **A.** This is from a book by Robert Smith titled Modern Labor
5 Economics. If I could, I'd just read the passage because it's
6 good. "If the presence of a tennis star increases attendance at
7 a tournament by 20,000 spectators, and the organizers net \$25
8 from each additional fan, the marginal income produced by this
9 star is equal to her marginal product. 20,000 fans times the
10 marginal revenue of \$25 per fan. Thus, here the marginal
11 revenue product equals \$500,000."

12 *Q.* And what does that tell you?

13 **A.** Well, in this example, the MRP of the athlete is 500,000.
14 So we now have a benchmark with which to compare her
15 compensation and make assessment as to whether or not her
16 employer is exercising monopsony power.

17 *Q.* What does this next slide show?

18 **A.** The next slide comes from a book by Rodney Fort titled
19 Sports Economics. And he says, quote, In a competitive talent
20 market, we expect that players get paid pretty close to their
21 MRP.

22 *Q.* And who's -- who's Rodney Fort?

23 **A.** Rodney Fort was actually a UFC expert that was used in the
24 UFC's acquisition -- or Zuffa's acquisition of Strikeforce
25 before the Federal Trade Commission in 2010/2011.

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1 Q. What does this next slide show?

2 A. The next slide comes from Roger Blair in a book titled
3 Sports Economics. It says, quote, Whether athletes are
4 exploited in the sense that their MRP exceeds the wage that the
5 team pays them is an empirical question. The evidence is that
6 athletes indeed have been exploited: They have been paid less
7 than they were worth to the team, end quote.

8 Q. And is this Roger Blair the same Roger Blair that we'll be
9 hearing from later in this proceeding?

10 A. That's correct.

11 Q. Okay. And he is working for Zuffa in this case?

12 A. Correct.

13 Q. Okay. How do you, in your analysis in this case, account
14 for fighter marginal revenue product in your work?

15 A. Right. So we don't get to directly observe what an
16 individual fighter's MRP is in this industry. However, we do
17 get to observe the event revenues that are generated.

18 THE COURT: Well, why not?

19 THE WITNESS: Why don't we?

20 THE COURT: Yes.

21 THE WITNESS: The problem -- we get something close.
22 The problem is we don't get to see an individual fighter's --
23 perform by him or herself. Right.

24 THE COURT: So, in other words, because there's a
25 lineup, there's a ticket, basically.

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1 THE WITNESS: Exactly.

2 THE COURT: So you have the top of the ticket and you
3 have other fighters. You rarely have, as you -- even in major
4 boxing events, you're not going to have an event where there's
5 not going to be other fights at the same event.

6 THE WITNESS: Right.

7 THE COURT: Okay.

8 THE WITNESS: But this experiment -- this experiment,
9 Your Honor, I mean, provides us a rich laboratory that isn't
10 available in many other industries, certainly, when you go
11 outside of sports in that. What we have is we have different
12 combination of workers being put together over and over and over
13 again, and we get to see the events.

14 THE COURT: Oh, I see. Because you can control for the
15 individual fighters because you have them on different cards.

16 THE WITNESS: That's right. That's right. And so what
17 I'm positing is that -- is that when we see a certain collection
18 together and there are events, it tells us something, it's not
19 equal to, but it tells us something about the collective
20 marginal revenue product of those fighters who are on display.

21 And the key assumption that I'm going to make is that
22 changes in the event revenues -- as you change that combination
23 of fighters, changes in event revenues are going to reflect
24 changes in the marginal revenue product of those fighters who
25 participated in that particular event. I'm going to exploit

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1 that -- that relationship.

2 BY MR. CRAMER:

3 Q. So let's take an example. Say Zuffa's event --

4 THE COURT: I'm sorry, Mr. Cramer.

5 MR. CRAMER: Oh, go ahead.

6 THE COURT: So do you have a model that does that?

7 THE WITNESS: Yes, that is my regression model.

8 THE COURT: No, but in the regression model there's a
9 variable that accounts for the individualized marginal revenue
10 product for each of the -- based upon the fact they appear in
11 multiple events?

12 THE WITNESS: We have -- yes, we have what are called
13 fighter fixed effects. So whenever we're looking at a
14 particular event, we'll have a dummy, and if it's the Jon Fitch
15 variable -- if Jon Fitch's profile was presented in that fight,
16 the variable would turn onto one, and it will control every
17 time -- every time Jon Fitch shows up in the database in a
18 particular fight, right, that dummy will turn onto one.

19 THE COURT: So in the context of that variable, you
20 created that variable, then, was able to predict, or not, what
21 the -- the fact that you weren't seeing the -- the increase in
22 the wage share as it relates to the marginal revenue product of
23 a particular fighter?

24 THE WITNESS: What I'm trying to do is control for all
25 things that is knowable that could explain variation in both the

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1 numerator by wage, or how much the fighter was paid, and the
2 denominator, how much event was generated. Right. And to make
3 that prediction, I want to condition on many things, but in
4 particular, who was on the card for that fight.

5 But at the end of the day, what I'm most interested in
6 is I want to control for everything possible that could be
7 moving the wage level and the event revenues, on the right-hand
8 side, and I want to focus my attention on foreclosure share.
9 That's -- at the end of the day, that is the anticompetitive
10 hypothesis to be tested.

11 Do we see all things equal as more and more fighters
12 get drawn into this long-term exclusive web and, therefore,
13 impair the ability of these rival promotions to compete
14 effectively, does that allow Zuffa to put downward pressure on
15 the wage share? Right. That's what I care about at the end of
16 the day.

17 BY MR. CRAMER:

18 Q. And by including all of these variables, and very granular
19 variables, like turning on a variable when Jon Fitch fights,
20 you're able to -- are you able to isolate the effect of
21 foreclosure share on the compensation for each of the fighters?

22 A. That's exactly what I'm doing. Because I recognize that Jon
23 Fitch could be special. And to the extent he's special, I want
24 to -- I want to accommodate that in the model. I want to -- I
25 want to isolate and control for all possible things that could

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1 be causing that left-hand side variable, the dependent variable,
2 the fighter's wage share.

3 Each observation -- an individual event generates
4 multiple observations in the database, right, because the
5 database is -- one observation is a fighter/event pair. So in a
6 given event, I've got multiple observations. Right. And so,
7 yes, I want to control for that. At the end of the day, what I
8 want to do is I want to isolate the effect of changes on
9 foreclosure share and changes on the fighter's wage share.

10 *Q.* All right. Let's go back to wage share more generally, just
11 briefly. If an economist only focuses on -- in your earlier
12 example, on the 10 percent increase in wage level, without also
13 looking at the fact in your example that event revenues doubled
14 over that same period in the example, could the economists draw
15 an incorrect inference about the exercise of monopsony power by
16 the firm paying that worker?

17 **A.** Absolutely. That economist might mistakenly look back and
18 say, Oh, wage levels are going up in absolute terms. That means
19 that there was no exercise of monopsony power here. But that
20 would completely miss the forest. Right. What we want to know
21 is how are the fighters -- how are the athletes doing in
22 relation to the amount of revenues that are being generated over
23 time.

24 *Q.* All right. Do you have a slide with information suggesting
25 that Dr. Topel himself agrees that Zuffa's event revenues are

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1 linked to the marginal revenue product of its fighters?

2 **A.** I do, and this is key.

3 During his deposition, Dr. Topel was asked about this
4 critical linkage. Because it is the building block in the wage
5 share approach. And he says: So -- the question is: So when
6 Zuffa makes its fighters more effective revenue generators,
7 fighters are able to generate more revenues when they fight. Is
8 that fair?

9 Yes.

10 Okay. So if what Zuffa does is make its fighters more
11 effective revenue generators, then what you are saying is that
12 Zuffa, in this example, is causing the marginal revenue product
13 of its fighters to increase, correct?

14 Answer: Yes.

15 **Q.** So what does that tell you?

16 **A.** What it's telling you is that we have another agreement
17 between the experts, which is good. In this case, we both
18 recognize that an increase in the event revenue, even caused by
19 Zuffa, right, is reflective -- is reflective of an increase in
20 the marginal revenue product of the fighters who are showcased
21 in that particular event.

22 There's an agreement here between the experts, and it's
23 key because it's going to inform the right way that we should
24 model this phenomena. Should we be looking -- studying the
25 effect of the conduct through the lens of the wage level or

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1 should we be studying it, instead, through the lens of the wage
2 share?

3 And what this is telling you is that -- is that
4 increases in event revenues reflect, in part, increases in the
5 marginal revenue product of the fighters on display. And
6 there's an agreement here between the experts on that.

7 Q. Let's continue this theme of agreement between you and
8 Dr. Topel. Does Dr. Topel also agree that changes in Zuffa's
9 event revenues would lead to changes in the compensation of
10 Zuffa's fighters?

11 **A.** He does.

12 Q. And what does this excerpt from his deposition show?

13 **A.** This is another really important exchange in his deposition.
14 He was asked: Question: The second-to-last sentence of
15 paragraph 200 at page 88 of your report says lower revenues
16 would likely lead to lower athlete compensation, right?

17 Answer: Yes.

18 Why do you believe that?

19 Answer: Because the revenues are part of the
20 willingness to pay for an athlete, and if -- look, if people
21 didn't want to come to fights, we couldn't pay the fighters.

22 That's pretty basic. Right?

23 Q. So what conclusions do you draw from that statement?

24 **A.** The conclusion I draw here is that -- is that changes in
25 revenues also are predicted by economic theory and by record

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1 evidence to affect the compensation of the employees. Right.
2 Of the fighters. And so this is key because now what we have is
3 this interconnected series of relations between the event
4 revenues going up on the one hand, being reflective of increases
5 of marginal revenue product, and also being connected, as a
6 matter of theory, to higher wages.

7 And it's this interconnectiveness that's going to
8 dictate a very particular way to analyze the problem, namely
9 through the wage share.

10 Q. Is it your view --

11 THE COURT: Hold on. Excuse me, Mr. Cramer.

12 So -- but in your model to disaggregate the
13 contribution with respect to foreclosure share between Zuffa's
14 contribution and the marginal revenue product, that's why you
15 include the promoter variable and other effects, right?

16 THE WITNESS: When you combine the data, yes, I do have
17 to control --

18 THE COURT: Because you have to, at some point,
19 separate those things out.

20 THE WITNESS: Correct.

21 THE COURT: Otherwise, then the model can't disentangle
22 them, and that's a problem, correct?

23 THE WITNESS: Correct. Correct.

24 THE COURT: So in other words, what you were talking
25 about earlier, you were saying that you agree with Dr. Topel

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1 that in fact these things work together, but in controlling for
2 their relative contribution to the increase in revenue, one has
3 a much greater impact than the other.

4 THE WITNESS: Correct. Correct.

5 THE COURT: Okay.

6 BY MR. CRAMER:

7 Q. Is it your view, Dr. Singer, just so we're clear, that in a
8 competitive market, the fighters would get 100 percent of the
9 event revenues?

10 A. That is not my view.

11 Q. What wage share did your model find, approximately, that
12 fighters would receive in the but-for world absent the
13 challenged conduct?

14 A. My model predicts that fighters would have received
15 something on the order of 50 percent wage share. That is, half
16 of the event revenues would have -- would have gone to the
17 fighters.

18 THE COURT: And also, not using -- because you use
19 another -- not model, but essentially formula, which is based
20 upon the preacquisition of, I think, Strikeforce and Bellator.
21 At some point you use percentages.

22 THE WITNESS: I'm comforted by the fact that when I use
23 a benchmark approach -- so what we've been talking about so far,
24 Your Honor, is the regression approach. The regression model
25 can simulate a world in which everything is identical, except

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1 the foreclosure share goes down. Right.

2 THE COURT: Right.

3 THE WITNESS: And that predicts something on the order
4 of 50 percent wage share. I'm comforted by the fact that in the
5 same industry, the MMA industry, and what Dr. Topel said was a
6 reasonable benchmark, I'm comforted by the fact that my estimate
7 is bracketed by what Strikeforce paid its fighters and what
8 Bellator paid its fighters. That gives me comfort that the
9 model is producing something useful. It's also comforting, as
10 an aside, that this is where most professional athletes are paid
11 in terms of wage share.

12 THE COURT: Within that range, actually. I think it
13 was, like, 60-something percent --

14 THE WITNESS: All signs are pointing, yes, are pointing
15 in the 50s, that's correct.

16 THE COURT: Okay. Well -- no, well, pointing to the
17 50s on the modelling, but in terms of what was paid by other MMA
18 promoters, it was actually higher --

19 THE WITNESS: Well, there was one -- I'm sorry. I
20 didn't mean to --

21 THE COURT: But I'm saying there was some that were
22 above 50 and some that were below.

23 THE WITNESS: Yeah, we had one that came in right below
24 50.

25 MR. CRAMER: Bellator.

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1 THE WITNESS: The Bellator. And one then we had one
2 that came in in the 60s.

3 MR. CRAMER: Strikeforce.

4 THE WITNESS: Strikeforce, right.

5 BY MR. CRAMER:

6 Q. All right. So you identified what your model showed the
7 fighters would be paid absent the challenged conduct. Can you
8 remind the Court approximately what the -- what wage share the
9 fighters have been paid with the challenged conduct in place
10 during the class period?

11 A. During the class period we have a wage share between 19 and
12 20 percent.

13 Q. All right. So the differential's approximately
14 30 percentage points, that's what you found?

15 A. Correct.

16 Q. Okay. Is wage share or labor share a common metric that
17 economists use to assess the competitiveness of worker pay?

18 A. Yes.

19 Q. Did you create a summary slide with some examples of
20 economists doing this?

21 A. I did.

22 Q. All right. What does this show?

23 A. So on this slide are two studies, Your Honor, and the first
24 comes from Simcha Barkai. And what he is studying is in the
25 context of regression he's trying to see if concentration in the

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1 industry under investigation is correlated in any way with how
2 much workers get to keep of the revenues that are thrown off,
3 what he calls the labor share, but what I'm calling the wage
4 share. Those terms are interchangeable. And what he finds --

5 THE COURT: So when you talk about concentration, I
6 just want to be clear that I understand what it is you're
7 talking about in terms of concentration of what.

8 THE WITNESS: Oh, how concentrated the industry is in
9 question. So, for example, if it's monopolized, if there's two
10 firms, three firms, four firms. Economists use this
11 construction call the HHI, Herfindahl-Hirschman Index, but there
12 are other ways to compute industry concentration, Your Honor.
13 You'll see things like what share of revenues are captured by
14 the top three firms in the industry, what share are captured by
15 top four firms.

16 HHI isn't the only standard, but it is a -- it is a one
17 way -- it's a nice summary statistic to find out how
18 concentrated an industry is.

19 And what Dr. Barkai found is that controlling for all
20 other aspects of an industry, knowledge that there's an increase
21 in the concentration is associated with a statistically
22 significant decrease in the wage share that are paid to the
23 workers in that industry. Right.

24 BY MR. CRAMER:

25 Q. What did Dr. Elsby find?

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1 **A.** Now, Dr. Elsby found something different, but the key here
2 is that he used the same lens. That is, he's studying the
3 impact of different factors or forces on how well workers are
4 doing with the lens of the wage share.

5 So what he found was that when he controlled for all of
6 the things in his model, he found that offshoring, that is the
7 moving of jobs offshores to foreign countries, right, had a
8 statistically significant effect on pushing down the wage share
9 or the labor share in a given U.S. industry.

10 **Q.** Is wage share, Dr. Singer, a common metric that sports
11 economists use to assess competitiveness of athlete pay?

12 **A.** Yes.

13 **Q.** Did you prepare a slide with some examples of economic
14 literature from -- of using wage share in the sports context?

15 **A.** I did.

16 **Q.** What does this show?

17 **A.** Well, this first one is from Gerald Scully in an article
18 that was published in 2004. And if I can just read it, it's,
19 quote, Is 50 percent or so as the player share the upper bound
20 in professional team sport? One suspects that it is not. If
21 all players were free agents, salary as a share of revenues
22 would rise substantially.

23 **Q.** And what is this telling you?

24 **A.** It's telling me a lot, but let's break it down. What
25 it's -- first of all, it's using the lens of the wage share to

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1 understand the effect of increases or decreases in free agency.
2 So if you give agency to the player, he or she has control
3 over -- over where they're going to work.

4 And what we're going to see in a series of study after
5 study is that changes in these restrictions -- now, these
6 studies are usually looking at the opposite direction, because
7 there's been a general lifting of restrictions. Here, Your
8 Honor --

9 THE COURT: You're saying there's been increase in free
10 agency effectively.

11 THE WITNESS: Yes. Right. We've had an increase.
12 Here, Your Honor, the only twist is that we've had an increase
13 in the restrictions on labor mobility. Zuffa has been inching
14 up the length of its long-term exclusive contracts over time.
15 We were at 12 months in 2003 and they pushed it into the 40
16 months now. Okay. And they've been -- and they've been
17 ensnaring more and more workers into their web.

18 But it's the same general mechanism, the same
19 framework, is that we're trying to figure out how do changes in
20 restrictions on labor mobility affect worker compensation.
21 You'll see application after application after application that
22 economists in the sports industry use the wage share to get at
23 that.

24 And the only thing that I wanted to add if I could,
25 Eric, is that when he says if all players were free agents, now

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1 of course not everyone is a free agent. Rookies are not free
2 acts. They have to wait a certain amount of time before they
3 get to free agency. Veterans enjoy free agency. But what
4 economists have been able to do is exploit that change when
5 veterans were able to secure free agency and they observed what
6 happened to wage share. And what he's saying is that if all
7 players were, right, if all players including rookies were free
8 agents, you would expect the wage share to go even higher than
9 50 percent.

10 BY MR. CRAMER:

11 Q. Did you prepare another slide with Dr. Scully's work?

12 A. I did.

13 Q. And what does this show?

14 A. So this is from the same study I believe, but he said: Wage
15 share measures transitions from monopsonistic labor markets in
16 the past to veteran free agency now.

17 And then another quote, after free agency, Dr. Scully
18 found that wage share increased in Major League Baseball,
19 National Basketball Association, National Football League, and
20 the NHL.

21 Q. What do you understand Dr. Scully to have meant by
22 monopsonistic labor markets in the past?

23 A. Sure. A monopsonistic labor market is the opposite of a
24 competitive labor market. So it's one in which the employer is
25 able to create that wedge between what the worker is producing

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1 on the one hand, the worker's marginal revenue product, and what
2 they get paid on the other hand.

3 Q. Dr. Singer, was the transition from monopsonistic labor
4 markets in the past to veteran free agency now an inevitable
5 development in these four major sports?

6 A. No, it wasn't. To take Major League Baseball as one
7 example, the reserve clause was fought over, litigated, in labor
8 disputes for a period of 80 years until the famous *Flood v. Kuhn*
9 case. Yes. And so, no, it didn't -- it wasn't a gentle
10 transition.

11 Q. And isn't this the 50 anniversary of the *Flood v. Kuhn*
12 victory?

13 A. It was, it was.

14 Q. In the UFC is there analogous mechanism in your view to the
15 reserve clause in baseball that affects fighters' ability to get
16 free agency?

17 A. Yes, it's the long-term exclusive contracts that Zuffa
18 imposes on its fighters.

19 Q. And we'll talk about those more in a bit. Do you have
20 another slide with more examples of the use of wage share in
21 sports economic literature?

22 A. Yes.

23 THE COURT: I don't think we need to go through all of
24 them, Mr. Cramer. You can move on from there.

25 MR. CRAMER: Okay. That's fine.

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1 BY MR. CRAMER:

2 Q. Why do you think it was useful for these economists to look
3 at wage share instead of or in addition to wage -- well, we'll
4 skip that.

5 Now, Dr. Topel says regarding your use of wage share,
6 he says it's different from this literature because he says this
7 literature analyzes the effect on the wage share of a, quote,
8 known change in monopsony power such as eliminating the reserve
9 clause in baseball. That's quoting Dr. Topel. Whereas, your
10 analysis, he says, is measuring the effect of the mere existence
11 of monopsony power. Is that a fair critique that Dr. Topel
12 levels at you?

13 A. No.

14 Q. Why not?

15 A. Because what I'm doing again is very analogous to what is
16 being done in each of these studies, which is in those cases in
17 these studies, the economist is looking at how a change in the
18 restriction on labor mobility -- it happens to be a relaxation
19 of those restrictions -- is affecting worker outcomes, athlete
20 outcomes, in the lens of the wage share. I'm doing the same
21 thing, but the only -- the only difference -- I'm of course
22 looking at a change in restrictions, but my change is moving in
23 the wrong way for workers. It's becoming more restrictive over
24 time.

25 But at the end of the day I'm looking at -- I'm looking

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1 at a change in restrictions on labor market mobility -- on labor
2 mobility, on worker welfare through the lens of the wage share.

3 That is, changes in restrictions on changes in the wage share.

4 It's the same thing that's being done in countless studies.

5 Q. All right. So we're done with the studies, but I wanted to
6 ask you, Dr. Singer, did you find evidence in the record that
7 Zuffa itself or its current owner, WME, used wage share in its
8 internal analyses?

9 A. Oh, yes.

10 Q. Documents?

11 All right. What is this -- we'll skip that. What does
12 this show?

13 A. So this, Your Honor, is a -- comes from an analysis that
14 WME, the eventual acquirer of Zuffa, prepared in studying the
15 prospect of buying Zuffa. And you can see along the top -- I
16 want to highlight the motivation for the study. They said
17 they've been asked by financing sources about fighter
18 compensation and how they plan to control fighter compensation.
19 And they say: It's a critical cost that we have must actively
20 manage. We believe our long-term 20 percent of revenue
21 assumption is reasonable.

22 And, Your Honor, if you look to the left side, I've
23 highlighted a section that says: Historically fighters have
24 earned 16 to 19 percent of revenues. And you see that -- if you
25 flash over to the bottom right, you can see what they're -- what

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1 they're charting. You see the 16, a 18, a 16, a 19. And what's
2 really interesting is that they then make a projection from '16
3 forward because this document is created in '16. So they have
4 no idea what the wage share is going to be. But they're going
5 to project it at 20. And they are confident that so long as
6 they can contain these costs at 20, they'll be able to squeeze
7 out the kind of profits that they're -- that they're hoping for
8 and that they're telling their prospective investors.

9 Q. Did you find that not just WME, but also Zuffa used wage
10 share in internal documents?

11 A. I did.

12 Q. What does this show?

13 A. So Zuffa itself uses the wage share when it thinks about
14 managing its business in the way -- in day-to-day operations.
15 Zuffa isn't thinking in terms of let's keep the wage level, some
16 number, at some fixed level. They're thinking instead of how do
17 we manage this business with an eye towards keeping the wage
18 share at a manageable level.

19 So here Zuffa is performing an analysis in which
20 they're computing fighter compensation as a percentages of UFC
21 event revenues. And you see, Your Honor, this is where I get
22 the 26 percent. This is an internal estimate. If you start at
23 2017, Your Honor, and you look up, you'll see the 25.85. That's
24 the 26 percentish estimate for wage share. And then you see
25 it's falling thereafter, falling, falling down, to 19 percent.

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1 The long-term trend is downward by 2013.

2 Q. Did Zuffa create a chart showing wage shares for
3 Pay-Per-View event revenues only?

4 A. Yes.

5 Q. And what does this show?

6 A. So these are -- this is a subset of the data. This is now
7 looking at how much is Zuffa paying its fighters for the
8 Pay-Per-View events, and you'll see a very similar pattern. The
9 only difference that I wanted to point out is that by the -- by
10 the end of the period, when you get to the 17s, the 15s, and the
11 17s, and the 16s, you're actually at a lower -- you're actually
12 a lower share, wage share, than for all Zuffa events. And this
13 isn't surprising. It basically is telling us that the degree of
14 exploitation is higher for Pay-Per-View events than for
15 non-Pay-Per-View events.

16 Q. Did you prepare a slide reminding the court of Dr. Topel's
17 opinion about the utility of using wage share as a measure of
18 compensation in this case?

19 A. I did.

20 Q. And what does he say?

21 A. So Dr. Topel said in his first report, this is TR1, quote,
22 Worker's pay as a percentage of the employer's revenue is not a
23 measure of anything useful or informative, end quote.

24 Q. Do you agree with that?

25 A. No.

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1 Q. Did Dr. Topel in his first report cite any of the documents
2 or studies that we just reviewed in reaching his conclusion that
3 wage share is not a measure of anything useful or informative?

4 THE COURT: Why don't we move on from --

5 THE WITNESS: No.

6 THE COURT: Because what I don't -- Mr. Cramer, I just
7 want to be careful about -- I don't want to spend most of
8 Dr. Singer's time on him summarizing Dr. Topel's testimony. If
9 you want to point out things that you think are an important
10 distinction, that's helpful. I'd rather have him discuss his
11 own modelling.

12 MR. CRAMER: Okay.

13 THE COURT: So I can understand that, so I can
14 understand that, rather than have him discuss his view of
15 Dr. Topel's modelling only to the extent there may be contrasts.
16 But I'd like to be able to get to his discussion about
17 foreclosure share and wage share and explaining just to make
18 sure that I understand how he arrived at the formulations for
19 those particular aspects of the model.

20 BY MR. CRAMER:

21 Q. All right. We're going to move to a new section just with
22 some background and then we're going to build up to the model.

23 THE COURT: What background? Because we have had a lot
24 of background.

25 MR. CRAMER: I'm going to ask him whether he thinks the

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1 industry is nascent because Your Honor raised that issue and so
2 I wanted to --

3 THE COURT: Why don't we get to the modelling. We can
4 circle back to it being nascent or not. I mean, I would rather,
5 again, get to the modeling because that's what we're here really
6 to discuss. And to the extent that's relevant, we can come back
7 to that, but right now I'd rather get to that part of it.

8 MR. CRAMER: Fair enough, Your Honor.

9 Let me ask you this, Your Honor. There's some
10 background about how the industry works and that I think help
11 explain why the contracts are foreclosing of competition that I
12 think would be useful.

13 THE COURT: Well, because I read that.

14 MR. CRAMER: Okay.

15 THE COURT: I mean, the report goes through all of the
16 clauses and why that -- why they have that sort of exclusive
17 effect and gives a chart about the length of the exclusivity
18 period.

19 I don't know that there's much dispute about that. I
20 mean, they disagree about to the extent to which there's
21 exclusivity, but they don't really disagree about that. They
22 disagree about foreclosure share and wage share. So let's focus
23 on those aspects of the modelling because that's where I think
24 the rub is in the context of the disagreement between the
25 parties.

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1 MR. CRAMER: Fair enough.

2 THE COURT: Unless I'm missing something, Mr. Isaacson.
3 Mr. Isaacson, you're not going to be disputing that those
4 particular clauses exist in the contracts. And you may dispute
5 the impact of them as relates to the sort of overall sort of
6 procompetitive or anticompetitive effect, but you're not
7 disputing the clauses themselves and their existence in the
8 fighters contracts, right?

9 MR. ISAACSON: The fighters contracts are the fighters
10 contracts, yes.

11 THE COURT: Exactly. Thank you. So let's move on from
12 there.

13 MR. CRAMER: Let me just say, Your Honor, just to be
14 clear, there is a big dispute about not what is in the fighters
15 contractors, but what effect they have in the marketplace, how
16 they foreclose petition, and some of that depends upon some of
17 this background information.

18 THE COURT: Well, to the extent that Dr. Singer needs
19 to explain that in the context of a foreclosure share, that's
20 fine.

21 MR. CRAMER: Okay.

22 THE COURT: But you can assume that I understand that
23 there are multiple ways at least as alleged by the plaintiffs
24 that the contracts have an exclusive effect and an
25 anticompetitive effect, and that they lock fighters into these

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1 contracts for periods that may extend their actual average
2 career. So we can skip past that whole section, there are
3 several pages of the reports that talk about that, to, again,
4 the issues about sort of wage share, foreclosure share, and that
5 aspect of the modelling because that's the most from my
6 perspective hotly contested aspect to that. Because that's
7 where Dr. Singer is trying to capture what in fact the
8 anticompetitive effect or antitrust injury is as it relates to
9 wages.

10 MR. CRAMER: Let me just say that Zuffa does dispute --
11 they dispute that they're monopsonist and monopolist. They
12 dispute that they're dominant contrary to all of the documents
13 that some of them we were going to take Your Honor through.
14 They dispute that the contracts were effectively perpetual.
15 They dispute -- they dispute -- they basically say that the
16 industry's very competitive when the evidence is that it isn't.
17 And so --

18 THE COURT: Well, let me say this. As it relates to
19 what I have to decide for certification, the thrust of their
20 arguments that I find to be one that I have to decide relates to
21 arguments about the modelling and the foreclosure share and the
22 wage share, right, as regarding the modelling. I can draw my
23 own conclusions as to what the potential impact is or not of the
24 clauses themselves. Certainly I can look at the percentage as
25 it relates to the relevant market share for the markets. They

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1 can make an argument about that. I don't know that that's
2 honestly their best or most persuasive argument.

3 I think their argument really is as relates to the
4 extent to which Dr. Singer's modelling can capture and separate
5 out sort of the antitrust injury and its commonality as it
6 relates to the effect on the bout class. That's where I see
7 this -- all of this to be focussed. So I would like to focus us
8 on that.

9 MR. CRAMER: There's -- I agree with that and we're
10 going to do that because that's -- Your Honor's the -- is the
11 sole audience for this. And we want to be helpful. There's
12 just one point I want to make before we get there. It will take
13 a few minute -- five minutes.

14 THE COURT: Okay.

15 MR. CRAMER: Okay.

16 BY MR. CRAMER:

17 Q. Did you see any evidence in the record as to what Zuffa's
18 economic motivation was for the challenged conduct, the
19 acquisitions, the exclusive contracts, and the coercion?

20 A. I did.

21 Q. And what was that? And I'll take you to this slide here.
22 And please explain what's in the slide.

23 A. Right. So this is a text from Lorenzo Fertitta to Dana
24 White, and it's in 20 -- 2014. And it relates to this issue of
25 foreclosure. What is foreclosure? We can talk about

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1 foreclosure in like a high level economic sense, but what does
2 it mean here? And what he said was, quote, We gotta keep taking
3 these f***ers oxygen until they tap out. We have sacrificed too
4 much to let anyone get traction now.

5 And Mr. Fertitta was asked in his deposition to explain
6 what he meant. And the question was: And who are the f***ers
7 oxygen that you needed to keep taking, as you're referencing to
8 in that text?

9 Answer: I believe it was referring to Bellator.

10 Q. So what does that tell you as an economist about what Zuffa
11 was thinking in implementing the scheme plaintiffs are
12 challenging in this case?

13 THE COURT: Mr. Cramer, I don't need this.

14 MR. CRAMER: Okay.

15 THE COURT: The statements, the e-mails, from Zuffa and
16 the UFC officials are very clear about what they were attempting
17 to do. The question is whether or not that creates an antitrust
18 case or class. So I don't think they're disputing that
19 Mr. Fertitta or Mr. White said what they said. They said what
20 they said. They're very clear about trying to dominate the
21 market. That doesn't necessarily mean that what they did
22 actually creates a class.

23 So, I mean --

24 MR. CRAMER: Yep.

25 THE COURT: -- they said what they said. But that

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1 doesn't necessarily have a legal impact unless it's borne out by
2 other evidence in the record, which is what I'm going to look
3 at. That's part of the record certainly, but I'm not going to
4 spend my time going through all of the different statements that
5 the various individuals made because I think there's also
6 additional information again that Dr. Singer and Dr. Topel can
7 elaborate regarding the questions before me.

8 MR. CRAMER: Understood. The only reason why we -- I
9 just focussed on this one, Your Honor, is because it
10 fundamentally explains what's going on here, which is that Zuffa
11 understood that the oxygen other promoters needed to compete was
12 fighters. And what it needed to do was lock them up --

13 THE COURT: I don't think there's any dispute about the
14 fact that they were trying to acquire --

15 MR. CRAMER: Okay.

16 THE COURT: -- as many fighters as possible as a way to
17 improve their -- their profitability and their market share.
18 Again, I don't think that they're disputing that they were
19 trying to increase their market share or the control of the
20 number of fighters. I don't think that that's disputed at all.
21 I mean, the question is to what extent that creates a legal
22 case, right, before me. So let's move on from there.

23 MR. CRAMER: All right. Let's talk about market power.

24 BY MR. CRAMER:

25 Q. What does an economist mean by market power?

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1 **A.** So it depends if we're talking about a product market or an
2 input market, but for an output market or product market, market
3 power is monopoly power. That is the ability to raise prices
4 over competitive levels.

5 If we're talking about input market, we're talking
6 about monopsony power. That is, the power to push wages below
7 competitive levels, that is, below the MRPs.

8 BY MR. CRAMER:

9 **Q.** And what does an economist mean by anticompetitive effects?

10 **A.** Anticompetitive effects are the result of certain conduct
11 when practiced by a firm with market power that represent a
12 degradation of the competitive process. If we're talking about
13 output markets, it typically manifests itself in the form of
14 higher prices or reduced output. If we're talking about input
15 market, we're talking about suppressed wages or suppressed
16 employment.

17 THE COURT: That doesn't affect profitability.

18 THE WITNESS: Correct.

19 BY MR. CRAMER:

20 **Q.** Which is the most relevant to class members in this case,
21 monopoly power or monopsony power?

22 **A.** Monopsony power.

23 **Q.** And why is that?

24 **A.** Well, the workers are the ones who received the wages. And
25 so they would be most concerned about whether or not they're

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1 being paid a competitive wages.

2 Q. And if UFC had monopsony power, what would that mean for UFC
3 fighters? What would we see in the data?

4 A. Well, what we would see is a wage level that wasn't
5 competitive; one in which the UFC was exercising monopsony
6 power, driving that wedge between the fighter's MRP and the
7 wage.

8 Q. What methods can an economist in an antitrust case use to
9 determine that a firm has monopsony power?

10 A. There are two methods by which an economist can establish
11 monopsony power. There are direct methods and there are
12 indirect methods. The direct methods are those -- are those
13 methods that speak directly to the firm's ability to push wages
14 down below competitive levels without incurring a loss. Right.

15 And the indirect methods here would be defining a
16 relevant input market and demonstrating that the defendant had a
17 significant share of that input market, plus entry barriers.
18 The combination of those two would allow one to infer that the
19 defendant possesses the power to suppress wage wages.

20 Q. How did you use the direct method here to show that Zuffa
21 had monopsony power?

22 THE COURT: Hold on. You don't need to go through
23 this. He does it because he goes through and talks about the
24 market share and the different markets in his report, correct?

25 MR. CRAMER: Correct, but --

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1 THE COURT: And partly, Dr. Singer, I want to get to --
2 I've read all of that.

3 THE WITNESS: Right.

4 THE COURT: Dr. Singer, I've read that part. I've read
5 about how this actually created sort of indirect and direct
6 evidence and your views about that. I really want to get to
7 aspects of explaining, again, your modelling based upon that.
8 So I want to move us to that part because that's the part that
9 will be most helpful to me.

10 THE WITNESS: May I -- may I suggest something?

11 THE COURT: Sure.

12 THE WITNESS: That to measure the foreclosure share,
13 the foreclosure share has to be occurring within some relevant
14 input market.

15 THE COURT: Right.

16 THE WITNESS: And I think that the problem is that if
17 we jump to the foreclosure share without explaining how I got to
18 the relevant input market, we can, but it might -- it might not
19 set up the foreclosure share discussion.

20 THE COURT: Oh, no. I think it's okay to go through
21 what the definitions of the relevant input and output markets
22 are. I mean, I think you do that in your report. I think
23 that's okay, but I don't think we need to repeat sort of the
24 ranges of the market share over time with respect to relevant
25 input and output markets or the submarkets because I think I'd

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1 rather focus on -- again, focusing -- going right into some of
2 the modelling. But if you want to provide that level of
3 background you have just described, that's fine.

4 THE WITNESS: Okay.

5 BY MR. CRAMER:

6 Q. All right. Well, let's talk about one of the main relevant
7 markets you used, the ranked market. Can you define and
8 describe that for the Court, please?

9 A. Right. So the ranked market includes all fighters and their
10 associated promoters, so long as the fighter had a rank between
11 1 and 650 according to this FightMatrix database. So what I'm
12 doing here, Your Honor, is I'm casting the net as wide as I
13 possibly can. I believe that a hypothetical monopsonist would
14 only need to control the Zuffa platform in order to exercise
15 monopsony power. I know that from the results of my regression.

16 But what I want to do to be as conservative as possible
17 is I want to bring in everyone that is conceivably within
18 this -- within this relevant market. And the way that I'm going
19 to draw the contours of this market is I'm going to allow the
20 ranking of the fighter and his or her associated promoter to
21 define those contours.

22 So FightMatrix is the database that has a ranking of
23 every fighter in every weight class between 1 and 650 at all
24 points in time. I'm going to impose one restriction that the
25 promotion had to have put on an event in North America because

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1 that conforms with my geographic market definition.

2 But this net is cast as wide as possible to include
3 all -- all suppliers who are the fighters and the purchasers,
4 the promotions, in this ranked relevant input market. And to
5 give you an idea of just how big it is, in a given year this net
6 draws in between 200 and 300 promotions. This is well beyond
7 what any hypothetical monopsonist would need to control in order
8 to exercise market power, push down wage here.

9 What this is saying, what is this is positing, Your
10 Honor, is that a hypothetical monopsonist would need to control
11 all of these promotions, hundreds of promotions, and thousands
12 of their associated fighters in order to exercise monopsony
13 power. That clearly is not the case, but I want to be -- I want
14 to be as conservative as possible when I draw the net. And I
15 wanted to give you an idea about how big the net is at the end
16 of this exercise.

17 THE COURT: Okay. And this is the FightMatrix ranking?

18 THE WITNESS: Correct.

19 THE COURT: All right.

20 BY MR. CRAMER:

21 Q. It's the ranked market. And did you also define a
22 submarket?

23 A. I did. I defined a headliner submarket. And the idea here,
24 Your Honor, is that if a hypothetical monopsonist only
25 controlled those fighters rank 1 through 15, that would be

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1 sufficient in my mind in order to exercise monopsony power. In
2 other words, the fighters who are within 1 through 15 are not
3 going to look -- if one -- if a hypothetical promotion had all
4 of them, those fighters would not be interested in substituting
5 to some inferior promotion --

6 THE COURT: Right.

7 THE WITNESS: -- that had, you know, fighters 300 to
8 355.

9 THE COURT: Right.

10 THE WITNESS: And, again, I'm going to impose the North
11 America event screen. And for this submarket, just to give you
12 an idea about its magnitude, in 2010 there were 34 promoters.
13 By 2016 the set had with dwindled to six. That was in part
14 because of the challenged conduct. There just weren't as many
15 unique promotions that had -- featured a fighter who was a
16 headliner by the end of the class period. They were either
17 acquired or went out of business, or Zuffa just took the
18 fighters from them.

19 Also associated with those 34 promotions there were
20 roughly 160 fighters. The reason why you get again from 15 to
21 160 is that we do it by weight class.

22 MR. CRAMER: All right. Your Honor, I'd like to ask
23 Dr. Singer about how he measures market share because the
24 weighting of that measurement is contested by Dr. Topel.
25 Dr. Singer uses revenue weighting for both market share and

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1 foreclosure share and also inverse ranked weighting. And so I
2 think that's an important part of what's the debate about.

3 THE COURT: Okay.

4 MR. CRAMER: Okay.

5 BY MR. CRAMER:

6 Q. All right. In computing market share for the ranked input
7 market, the broader market first, did you weight all MMA
8 promoters equally?

9 A. For the ranked market I did not.

10 Q. So what did you do there? What measures did you use to
11 weight the promoters?

12 A. Well, I did it a few ways. But the first way was to rank --
13 was to weight the value of the pool by the revenues of that
14 associated promoter. And so, Your Honor, what I'm trying to do
15 is I have -- I have all of these different promotions and their
16 associated pool of fighters. And I want to try to figure out
17 how important is -- is promoter's A pool relative to promoter's
18 B pool. Right. And I recognize that because we've cast the net
19 so wide, we've got fighters ranked 1 through 650 by weight
20 class, that not all fighters are equally valuable, right.

21 If I've locked up the highly ranked fighters, that
22 would be more -- a sign of more dominance than if I were to lock
23 up, you know, the lower ranked fighters. And so the question is
24 how do I -- how do I -- given how big this net has been cast,
25 how do I weight the different -- the different pools of fighters

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1 that are within a promotion?

2 And on my first approach, right, if what we're trying
3 to get at is the revenue-generation capability of a fighter
4 pool, I thought the most natural way would be the average
5 revenue per event of the associated promoter. So that was the
6 first passthrough.

7 BY MR. CRAMER:

8 Q. And what was your alternative weighting measure?

9 A. My alternative weighting is to say, Okay, let's instead
10 weight each fighter within a given promoter's pool by the
11 ranking or in particular the inverse ranking. So what that
12 would mean is that if I control the pool of fighters that are
13 really, really highly ranked, my pool would look bigger in terms
14 of my market share in this market. And if you had a pool with
15 lowly ranked fighters or vice versa, you might have the better.

16 THE COURT: Right.

17 BY MR. CRAMER:

18 Q. In terms of the revenue weighting, is there anything unusual
19 as a matter of economics in computing a firm's share of a
20 relevant market using that kind of weighting?

21 A. No. In fact, the merger guidelines suggest that revenue
22 weighting is the default option. To give you an idea, if we
23 were to try to figure out Apple's share of the cellular handset
24 market, one approach could do you treat every unit sold equally.
25 Right. But what that would ignore is the fact that Apple can

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1 command \$1,000 per phone right now.

2 THE COURT: Right.

3 THE WITNESS: And so if we use revenues instead, it's
4 going to capture an important aspect of Apple's pricing power.
5 Right. At the end of the day this is an indirect approach to
6 get at Zuffa's buying power. And so if we're trying to get at
7 Apple's --

8 THE COURT: It's also based upon the ability of it to
9 control the value of the fighters' services.

10 THE WITNESS: Correct, correct.

11 THE COURT: So, in other words, you're just saying --
12 basically by weighting you're saying that not all fighters
13 services are created equal even in the context of the ranking.

14 THE WITNESS: Correct.

15 BY MR. CRAMER:

16 Q. All right. Let's talk about foreclosure.

17 MR. CRAMER: Before we jump into the numbers, I think
18 it's important for the Court to understand and for Dr. Singer,
19 if the Court will allow, Dr. Singer to explain why top level
20 fighters are important to a promotion.

21 THE COURT: Well, I think he's already done that. And
22 I think that was done by the report that was earlier identified.
23 He did it, but also the report references the other report. I
24 think it was McGowan and Mahan, or I don't know how you
25 pronounce their names, that do a separate analysis. So I'm

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1 convinced of that, and that's also why he has the headliner
2 submarket. So we don't need to have him explain that again.

3 MR. CRAMER: Okay. And another point we were going to
4 explain that we apparently don't need to, and that's great, we
5 can move on, is that it's not just one or two top level
6 fighters; but what's necessary, according to the record and the
7 economics, is the critical mass, right. One person can't just
8 fight the other person every day.

9 THE COURT: Well, no, it's a critical mass of both the
10 submarket and the overall market.

11 MR. CRAMER: Yes.

12 THE COURT: And that's why you have the submarket of
13 headliners in control of that because, right, you can't have,
14 you know, number one fighters fighting number 30 fighters all
15 the time. If you don't have other fighters who are within that
16 same top 10, you know, then you might not have the same control
17 of the headliners submarket, which I believe was your point.

18 MR. CRAMER: That is correct.

19 THE WITNESS: That's better said.

20 THE COURT: No, I wouldn't say that, but I have read
21 this material.

22 BY MR. CRAMER:

23 Q. Okay. That's -- all right. Let's talk about foreclosure
24 share.

25 Do economists have a standard way of quantifying the

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1 extent of market foreclosure in an exclusionary conduct case
2 like this?

3 **A.** They do.

4 *Q.* And what do they do?

5 **A.** Well, they begin by defining a relevant market which I've
6 done as this input market. And the next step is to figure out
7 what their market share is. This is the building block, right.
8 And then figure out of those -- of those customers, or in this
9 case workers, who are locked into these long-term exclusive
10 contracts, which one of them are foreclosed in the sense that
11 their contracts contain or, I should say, potentially foreclose
12 in the sense that their contract contain terms that economists
13 associate with exclusive or exclusionary conduct.

14 *Q.* How did you apply that methods here, if you did?

15 **A.** Yes. So what I did was remember the way my analysis began
16 back in 2014 was we had --

17 THE COURT: So before you do that, let me just make
18 sure I understand because I want to make sure I'm understanding
19 when you talk about the context of the foreclosure share, first,
20 that's not a concept you created yourself.

21 THE WITNESS: No, it's a very common concept in
22 economics.

23 THE COURT: Second, in the context of foreclosure,
24 you're really talking about the inability of a particular
25 fighter to actually access the outside market. And what I mean

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1 by that is to be able to go beyond their particular promoter to
2 another promoter. That they essentially don't have the ability
3 legally based upon the contract to move outside. Because I want
4 to make sure I understand what it means that they are
5 foreclosed.

6 THE WITNESS: There's a second meaning. That meaning
7 is very important. That meaning is very important, but there's
8 another perspective, which is from that of a rival or would be
9 rival promoter, right. If a rival promoter can't get access to
10 this critical must-have input, then that rival promoter is going
11 to be impaired in its ability to compete in both the input
12 market and on the output market.

13 THE COURT: Right, that creates barriers --

14 THE WITNESS: That's a foreclosure --

15 (Court reporter interruption.)

16 THE WITNESS: I'm sorry.

17 THE COURT: So the first -- so are you saying, one, it
18 creates barriers to entry; it also creates the inability to
19 compete --

20 THE WITNESS: Correct.

21 THE COURT: -- generally if you're already in the
22 market?

23 THE WITNESS: Correct. And that is the notion of
24 foreclosure. I'm foreclosing my rivals from getting access to a
25 must-have input.

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1 THE COURT: So my question about that is the
2 foreclosure share also meant to capture the inability to enter
3 the market.

4 THE WITNESS: Yes, there's record evidence that
5 suggests that Zuffa and its investors understood that the
6 exclusionary contracts were serving as the key entry barrier for
7 rival MMA promotions.

8 THE COURT: Okay. Thank you.

9 BY MR. CRAMER:

10 Q. And that evidence obviously is in Dr. Singer's report and --
11 and Deutsche Bank studies and bankers of Zuffa and internal
12 analysis where Zuffa saw that one of the key reasons why it was
13 valuable was because it had all of the top fighters locked up.

14 THE COURT: Right. So it acquired fighters and
15 required them to sign their contracts and closed down the staff
16 or whatever from that acquired entity.

17 MR. CRAMER: And the reason why we showed you that
18 Bellator oxygen quote was because Zuffa recognized that the
19 fighters are the oxygen. If we can keep oxygen from our
20 potential rivals, they're not going to be able to compete.

21 THE COURT: Right, but the question is -- certainly
22 that's the intent. The question is, Mr. Cramer, whether or not
23 they did it. Right. So what this case isn't about -- there's
24 no dispute, unless Mr. Isaacson tells me otherwise -- I don't
25 know that he really could give all of the quotes -- that they

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1 weren't trying to do that. The question is did they actually at
2 least sufficiently -- have you sufficiently alleged that they
3 did do it.

4 MR. CRAMER: Yes.

5 THE COURT: Right. So that's why I'm saying the quotes
6 don't necessarily to me matter. What matters is did they
7 actually affect when they potentially at least arguably were
8 intending to affect by that type of exclusion. Mr. Isaacson.

9 MR. ISAACSON: We agree that that's the relevant
10 question for this hearing. Those quotes, as we proceed, are the
11 types of things that competitors say about one another.

12 THE COURT: Right.

13 MR. ISAACSON: And we don't think show intent. I don't
14 think you're deciding that today.

15 THE COURT: No, I'm not because as far as I am
16 concerned they don't really have any legal impact. The legal
17 impact from my standpoint or the decision today is what actually
18 can be demonstrated by the modelling. Did in fact -- whether
19 they intended or not to do that, did in fact or is there
20 sufficient evidence to allow the case to proceed in terms of
21 certification as it relates to the ability to foreclose in terms
22 of the wages, so ...

23 MR. CRAMER: Fair enough, Your Honor. I would just say
24 that some of the quotes from Zuffa's bankers, its investors, and
25 its owners are not just a statement of intent. They are a

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1 statement of this is what we've done and we've succeeded. The
2 reason why we were able to sell -- be sold for \$4 billion is
3 because we locked up the vast majority of top fighters, kept
4 them away from our competitors, potential competitors, who
5 couldn't compete with us, and made them all into the minor
6 leagues. So these are not merely statements of intent. This --

7 THE COURT: I understand that.

8 MR. CRAMER: They're statements of we succeeded, and
9 they did succeed fabulously.

10 THE COURT: Again, that's not -- again, Mr. Cramer, I'm
11 not necessarily focussed on that because that's not really what
12 I have to decide right now as relates to this motion. So --

13 MR. CRAMER: Yes.

14 THE COURT: -- let's move on from there.

15 MR. CRAMER: Let's talk about your foreclosure share
16 calculation which I think is getting right to His Honor's issue
17 did Zuffa actually lock up the vast majority of fighters and
18 what effect did that have.

19 BY MR. CRAMER:

20 Q. And so in computing foreclosure share, is that similar to
21 market share?

22 A. It's very similar. In fact, the market share -- my market
23 share measure is the building block of foreclosure share.
24 Here's how they relate. If you assume, which is not the case,
25 that 100 percent of -- at all points in time that 100 percent of

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1 all of Zuffa's fighters were locked into long-term exclusionary
2 contracts, then the foreclosure share is just equal to the
3 market share. Right. There's no adjustment necessary.

4 But what I need to get a foreclosure -- it's a subset.
5 It's typically a subset of the market share. I need to go and
6 look at every fighter whom I've assigned to Zuffa to get their
7 market share. And I need to pull out the ones -- whose
8 contracts do not contain these potentially exclusionary terms.
9 Right.

10 THE COURT: Right.

11 THE WITNESS: And the result is I get a foreclosure
12 share, which moves around of course over time with the market
13 share, but it's typically less than the market share because
14 it's typically the case, at least at the beginning of the class
15 period, that not all fighters fighting for Zuffa were subjected
16 to the offensive or the allegedly offensive or potentially
17 exclusive contracts.

18 What happened, Your Honor, over -- over the period of
19 study is that Zuffa ratcheted up the length of the contract so
20 that more and more fighters who were fighting for Zuffa had
21 their terms extending beyond this 30-month threshold that I use.

22 THE COURT: Right. And at the same time I think you
23 also argue that the average career length for the fighters was
24 decreasing or there was a period in which it was longer
25 potentially than the exclusivity period, but actually that

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1 contracted over time as well. Is that right?

2 THE WITNESS: Well, the point that I'm making in slide,
3 Your Honor --

4 MR. CRAMER: And that's right up on the screen. Why
5 don't you describe it. I think it would help.

6 THE WITNESS: Sure, sure. So these are my estimates of
7 the relevant career durations.

8 THE COURT: Right.

9 THE WITNESS: Right. And what I want to do is come up
10 with a number that is associated with my relevant input markets.
11 And it's going to depend on which set of fighters I'm looking
12 at. Right. If I'm looking at the ranked market, I want to know
13 for everyone who shows up in my ranked market database at some
14 point in time, if I chart their careers up until the point that
15 they leave, I want to take a measure of how long they were
16 within the ranked market. This is important and something that
17 distinguishes what I did with Dr. Topel is that I don't want to
18 count any time of that fighter when he was in the,
19 quote/unquote, minor leagues, when he was outside of the ranked
20 market. And I don't want to count any time of course after he's
21 left the ranked market via retirement or injury. I just want to
22 get a measure of the time he or she was in the ranked market.
23 And then I want to take an average across everybody in my
24 database, and that's what that first row captures.

25 That the -- and I'd like to focus -- we did the median

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1 and the mean, but I would like to focus on the mean. That 2.55
2 years is associated with about 30 months. So on average across
3 all fighters in the ranked market the average career duration is
4 30 months. And the reason why that's economically important is
5 that as Zuffa was --

6 THE COURT: When you say "career duration," I want to
7 make sure I'm understanding this, is that -- that's the period
8 in which they were physically fit to fight and did at least
9 potentially have some fights. I know there's a whole separate
10 argument about controlling the number of fights that fighters
11 had and suppressing their ability to actually fight as often as
12 they would like to be able to fight.

13 But when you talk about career, you're not simply just
14 talking about because I think you make a distinction in your
15 report about the extent to which a contract would potentially
16 extend beyond, say, someone's ability to fight, but covered
17 additional periods after they had retired and could no longer
18 fight.

19 THE WITNESS: Right.

20 THE COURT: Okay.

21 THE WITNESS: That's true. Yes.

22 BY MR. CRAMER:

23 Q. Zuffa says that in measuring foreclosure share you simply
24 assumed all of Zuffa's fighters were foreclosed. Is that true?

25 A. It's not true, as I've just explained, that if I assume

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1 that, then my market share measure would be equal to my
2 foreclosure share measure at all points in time. And that's
3 clearly not the case. It's always the subsets, at least towards
4 the beginning of the class period it is.

5 Q. But what about those contracts that you did count as
6 contributing to foreclosure share? Didn't you assume those were
7 exclusionary or anticompetitive?

8 A. I didn't assume they were exclusionary. I assumed they were
9 potentially exclusionary. Right. What I'm setting up is an
10 empirical test. I'm identifying those contracts that have terms
11 that economists and antitrust scholars have recognized as being
12 potentially exclusionary. And I want to see, if I come up with
13 a measure of the foreclosure share of the percentage of fighters
14 that Zuffa has subjected to these potentially exclusionary
15 terms, is that predictive in any way of changes in a fighter's
16 wage share --

17 Q. And what are those -- you have a slide, Dr. Singer, of the
18 items you've looked at in determining whether a contract was
19 potentially exclusionary. Are they up on the screen?

20 A. They are. So these are the three elements that the code
21 required -- statistical code that required in order to count a
22 contract as being potentially exclusionary at a given point in
23 time. Right. Number one is was it exclusive. Number two is
24 did it include a champion's clause. So the champion's clause is
25 that the contract would automatically renew upon the fighter

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1 becoming the champion. And number three is that the contract
2 length had to exceed 30 months.

3 If it had all of those three elements, I considered
4 that fighter to be potentially -- I consider the contract to be
5 potentially exclusionary, and I would count that fighter in the
6 numerator of my foreclosure share. And just one thing that I
7 think is important, contract length. There are three components
8 that are adding up to the total contract length. It's just
9 important because sometimes the term gets confused with
10 counter ...

11 Term is just one of them. Right. So the term of the
12 contact again started off around 12 months in 2003 and we see
13 that thing get pulled up to I think 22 months by the end of the
14 of the class period. Right. The other -- the other components
15 that go into the contract length are the exclusive negotiation
16 period. So there's a 90 day or three-month period in which,
17 even after the contract expires, Zuffa has exclusive rights to
18 that fighter over 90 days. Right.

19 But it doesn't end there. After a fighter waits out
20 that 90 days, when the fighter 's decided they want out, then
21 there's a right-to-match provision that lasts another year,
22 another 12 months on top of that.

23 So it's the -- it's the combination of those three
24 things that I sum up: the term -- the term, the exclusive
25 negotiation period, and the right-to-match period that dictates

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1 the length of the contract. If you want out, how long you'd
2 have to wait before you get out.

3 THE COURT: Right.

4 BY MR. CRAMER:

5 Q. And let me just understand a little bit about that
6 right-to-match period. If a fighter wants out and Zuffa doesn't
7 want to let that fighter out, what happens during that
8 right-to-match period?

9 A. If --

10 THE COURT: Well, I've read the contract, Mr. Cramer.

11 MR. CRAMER: Okay.

12 THE COURT: We don't need to go through that.

13 BY MR. CRAMER:

14 Q. Okay. Let's see -- did you prepare a slide with what the
15 foreclosure shares were, as you've just described, over time?

16 A. I did.

17 Q. All right. And let's look at that. What is this depicting?

18 A. So the -- this slide is depicting how Zuffa's foreclosure
19 share changes over time. And I do the foreclosure share
20 multiple ways. The first way is for the ranked input market,
21 and in this case the pools of all promoters -- fighters, the
22 fighter pools, are weighted by the revenues. And this shows
23 that the foreclosure share is around 30 percent --

24 THE COURT: Okay. So, Dr. Singer --

25 THE WITNESS: Yes.

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1 THE COURT: -- can you -- I just want to make sure I
2 understand. Tell me exactly what the foreclosure share is.

3 THE WITNESS: Yeah. What it is it's a measure of how
4 much of the market, of the input market, has been sewn up or
5 sewn off by Zuffa via primarily the exclusive contracts, how
6 much the market has been taken away from rival promoters.

7 THE COURT: So the foreclosure share would be what
8 percentage of the market not only that they control, but that
9 they exclusively control.

10 THE WITNESS: Exactly, exactly. Because it's -- if
11 it's not exclusive, it's not counseled in the new --

12 THE COURT: Okay. And you gave the definition of what
13 that meant in terms of the sort of exclusivity and foreclosure
14 based upon those three sort of what were umbrella factors that
15 identified when someone would be placed into the foreclosure
16 share category. Now, this was by fighter or does this include
17 also the weight for the fighter's services?

18 THE WITNESS: Well, both, but it -- I think the easiest
19 way to think about it is in stages. First, we just want to
20 figure out who is the numerator. Right. The numerator would be
21 Zuffa fighters who are fighting pursuant to a contract that is
22 potentially exclusionary.

23 THE COURT: Right. I got that.

24 THE WITNESS: And so we want to pull out those fighters
25 who are fighting pursuant to a contract that doesn't contain all

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1 three of those terms.

2 THE COURT: Got it.

3 THE WITNESS: Then once we have the resulting pool of
4 fighters who are, we're going to apply the revenue weights.

5 THE COURT: Okay. So I just want to make sure. So the
6 foreclosure share includes not just in terms of sort of the
7 market share, but includes -- the foreclosure share also
8 includes the revenue weights with respect to your valuation of
9 the respective value of the fighter's services.

10 THE WITNESS: For one cut, yes, but what's critical is
11 that the revenue weights are not necessary to show high
12 foreclosure. Right. We're going to do this over and over again
13 for different weightings, different market shares --

14 THE COURT: So hold on. I'm sorry. So when you say
15 for one cut, what you're saying is that you ran different
16 analyses with respect to foreclosure share. Some that included
17 the revenue weights and some that were just included the
18 numerator based upon the number of fighters?

19 THE WITNESS: Yeah, in the headliner submarket, Your
20 Honor, there is -- we do one specification with no weighting.

21 THE COURT: But I'm saying, taking out the headliner
22 submarket, is there -- and I just want to make sure I'm
23 distinguishing in terms of my own the models that include the
24 larger input market that also is -- where there's analysis both
25 with the revenue weights and without the weights?

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1 THE WITNESS: When we go the largest one, right,
2 because we have the headliner, the tracked, which is the
3 little --

4 THE COURT: Yes.

5 THE WITNESS: And then the ranked. When we go to the
6 largest one, 1 through 650, it is my opinion that you have to
7 apply some weight. That is, it wouldn't make any sense to treat
8 a promotion --

9 THE COURT: Right.

10 THE WITNESS: -- fighters, you know, 620 through 630,
11 the same as some. When you cast the net that wide, you have to
12 weight. And I give it two different ways. I do a weighting
13 with revenues, based on revenues. And I do a weighting based on
14 the inverse of the fighter's rank. And no matter how I do it
15 for the ranked market you're going to see numbers that are
16 vastly in excess of what --

17 THE COURT: I'm sorry. For the ranked market or for
18 the --

19 THE WITNESS: For the ranked. For the ranked market I
20 can also do ranked weighting. Let me explain that because it's
21 -- if I could, because it's a little complicated. Right.

22 In the ranked market we're going to include everybody
23 with a rank 1 through 650 and they had to have fought within the
24 18-month window that we're looking at. Right.

25 And then the question is how do I weight them. Right.

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1 Because the pools could be different depending on where these
2 fighters are. Under the revenue weighting approach I take the
3 average revenue per event that is generated by that promotion in
4 question. If I -- alternatively, I can rank each fighter in
5 Zuffa's pool based on where that fighter is ranked and I'll do
6 it for all promotions. Right. And so it's -- it does sound
7 complicated. It is a ranked market and I'm using ranked
8 weighting.

9 What I'm trying to show Your Honor at the end of the
10 day is that the revenue weighting is the best way to do it in my
11 opinion, but it's certainly not necessary. Certainly to get the
12 regression results it's not necessary to show foreclosure that's
13 in excess of what economists and antitrust scholars consider to
14 create presumption of anticompetitive facts.

15 THE COURT: Okay. Thank you.

16 BY MR. CRAMER:

17 Q. Dr. Topel says or Zuffa says at some point that instead of
18 using revenue weighting you should have used weighting by the
19 compensation of the fighters. Are they right about that?

20 A. Well, no, they are not right, for a few reasons. Number
21 one, the whole theory of this case is about Zuffa's ability to
22 suppress compensation. So it would be perverse to use a metric
23 compensation that would fall whenever Zuffa exercises monopsony
24 powers. That was the first reason that --

25 THE COURT: In other words, you want to have a variable

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1 that would be independent of what are the alleged
2 anticompetitive conduct they're engaged in.

3 THE WITNESS: Right. We wouldn't want to reward Zuffa
4 for suppressing compensation and then have it look at if its
5 market share was actually lower. That would be -- that would be
6 weird.

7 THE COURT: Right.

8 THE WITNESS: And, secondly, this is kind of an
9 academic matter is that we only had detailed compensation data,
10 again, for Zuffa and Strikeforce. So just as a practical matter
11 the idea that we'd go out and do this for every promotion just
12 wasn't feasible in light of what I had.

13 BY MR. CRAMER:

14 Q. As a matter of economics would it make -- aside from the
15 first point you made, would it make such difference to weight by
16 compensation versus weight by revenue?

17 A. I don't think so. And the reason is is that compensation of
18 course, as Dr. Topel has pointed out, is directly linked with
19 revenue. And so the idea -- if we use compensation, I wouldn't
20 expect it to move the needle all that much.

21 Q. Right. So there seems to be an agreement here that there
22 should be some form of weighting. Zuffa says compensation. We
23 say revenue. And is it your view that either one would show a
24 high foreclosure share?

25 A. It is my view, but it's also my view is that neither one of

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1 those two measures raise any kind of individualized issues.

2 It's either compensation for everybody in the class or it's
3 revenue for everyone in the class.

4 Q. Dr. Singer, I'd like to ask you one question about this
5 slide. There appears to be a large jump in or about 2010 to
6 2011 foreclosure share. Foreclosure share appears to go from 30
7 percent to about 70 percent. Zuffa controls about 70 percent of
8 the input market by 2011. What accounts for that in your
9 economic opinion?

10 A. The Strikeforce acquisition.

11 Q. And why does it appear to happen before 2011 in your chart?

12 A. Here's what happens. I mentioned the 18-month window, Your
13 Honor. And so at any point in time we're trying to determine
14 who's in the relevant market. And so suppose we're looking at a
15 given point in time. My model is going to look for all fighters
16 who fought in the previous nine months and all fighters who
17 fought in the subsequent nine months. And if so, then I'm going
18 to consider those fighters, so long as they had a rank 1
19 through 650, right, they participated in an event that was in
20 North America, those fighters will be in the market. And so the
21 reason why --

22 THE COURT: The lag effect.

23 THE WITNESS: There's a lag effect. So this thing is a
24 leading indicator. It's showing you what's happening as the
25 Strikeforce acquisition kind of works its way through the

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1 pipeline.

2 THE COURT: They still had Strikeforce contracts at
3 least initially, too. And then there's -- I thought that they
4 were then brought in under the Zuffa after the --

5 THE WITNESS: When they made the acquisition, my
6 understanding is they were converted immediately to Zuffa --

7 THE COURT: No, I meant within the look-back period.

8 THE WITNESS: Well, but it's the looking-forward period
9 that's creating -- that's creating this upward trajectory before
10 the Strikeforce merger is consummated or acquisition is
11 consummated. And we're just trying to explain why you see the
12 uptick a few months before the actual consummation in March.

13 THE COURT: Oh, because it's looking forward and back.

14 THE WITNESS: It's looking forward and backward.

15 MR. CRAMER: And that uptake, just to be clear --

16 (Court reporter interruption.)

17 THE COURT: Oh, yes. I'm sorry. We have been going
18 for a little while. Why don't we take a 10, 15-minute break.
19 What we'll do is we'll come back -- actually, I mean, we're
20 actually close to the lunch hour. We could just take a lunch
21 break at this point in time.

22 Why don't we just take a lunch break. We'll come back
23 in an hour, and then we will finish up here. Okay.

24 Anything else we need to do before we do that?

25 MR. CRAMER: Thank you, Your Honor.

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1 THE COURT: All right. Thanks. We'll be in recess.

2 Thank you.

3 (Recess taken at 12:48 p.m.)

4 (Resumed at 1:58 p.m.)

5 THE COURT: Please be seated.

6 Okay. We're back on the record here.

7 Dr. Singer, you recognize you're still under oath?

8 THE WITNESS: Yes.

9 THE COURT: All right. Mr. Cramer.

10 MR. CRAMER: All right. Thank you, Your Honor. Good
11 afternoon.

12 BY MR. CRAMER:

13 Q. So we were talking about slide 57 and Zuffa's foreclosure
14 share. Dr. Singer, can you just summarize what this slide is
15 showing, just so we can get situated.

16 A. The slide is showing how Zuffa's foreclosure share changed
17 over time, given a very particular market definition and
18 weighting metric. So this is the ranked market definition using
19 revenue weights. And what it basically shows is that at the
20 beginning of the class period, Zuffa's foreclosure share by this
21 measure is around 30 percent, and it shot up to around 70 at
22 the -- at the Strikeforce acquisition. And it continued to
23 climb up until almost 90 percent and then fell back down into
24 the 80s and then back up into the direction of 90.

25 Q. Did you also prepare a slide that included your foreclosure

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1 share for the headliner submarket?

2 **A.** I did.

3 *Q.* What does this show?

4 **A.** So this shows the same information, but this time for a
5 different input market, the headliner market. And I'm, again,
6 using revenue weights. It follows the same trajectory. It's
7 lower. It's -- it's around -- well, around 30 percent. Let's
8 see. Sorry. Headliner is above. I apologize for that. The
9 headliner is the purple one that's right on top. I'm sorry for
10 that.

11 THE COURT: That's all right.

12 THE WITNESS: So this one starts higher. At the
13 beginning of the class period, it starts around 80 percent. It
14 jumps up to 90, and then even approaches 100 percent. And the
15 reason why the headliner is higher is because Zuffa has a more
16 dominant share among the headlining fighters.

17 BY MR. CRAMER:

18 *Q.* Did you also prepare a slide that had the headliner
19 submarket without revenue weighting?

20 **A.** I did.

21 *Q.* What does this show?

22 **A.** So now we've drawn on top of this graph a dashed purple
23 line, and as the -- as it notes at the bottom, Headliner
24 Unweighted. You see it tends to follow a similar trajectory.
25 It's lower here. And it's lower relative to the revenue

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1 weighted headliner. But the important takeaway is that even
2 without weighting, when we do the headliner submarket, Zuffa's
3 foreclosure share can be shown to be at significantly high
4 levels.

5 Q. So in summary --

6 THE COURT: So in the context of the literature, I
7 understand that foreclosure share, in terms of being interpreted
8 as being anticompetitive, to be somewhat at the 20 to 30 percent
9 range. Is that what you understand to be the standard?

10 THE WITNESS: My understanding is that --

11 THE COURT: I'm not talking about the legal cases. I'm
12 talking about sort of the economic literature.

13 THE WITNESS: The economic literature, and antitrust
14 scholarship generally, looks at a foreclosure share of around
15 30 percent, creating a presumption of anticompetitive effects.
16 But I don't mean to suggest that my proof of impact ends here.
17 This is just consistent with what the takeaways are from the
18 literature. I'm going to go one step farther and, of course,
19 show that foreclosure share explains variation in wage share.
20 That's how --

21 THE COURT: Why would --

22 THE WITNESS: Sorry.

23 THE COURT: Okay. Why would there be such a difference
24 in the foreclosure share if it's unweighted versus if it's
25 weighted? Would that be explained by having a few, but

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1 significant number of fighters who were not under contract to
2 Zuffa but who are not essentially fighting? I mean, because it
3 seems to me that there's such a huge difference between the
4 headliner unweighted and revenue weighted that, right, unless
5 I'm ...

6 THE WITNESS: So you're comparing the two -- just to
7 make sure I understand --

8 THE COURT: Yes.

9 THE WITNESS: -- you're comparing the two headliners,
10 headliner and headliner --

11 THE COURT: Yes.

12 THE WITNESS: -- and revenue weighted and one is
13 unweighted.

14 THE COURT: Yes. And if you look at even sort of that
15 little -- sort of the two sort of periods there that are going
16 up, and around 2011 -- I'm not talking about 2007, but around
17 the 2011, that little column that goes up, there, obviously, are
18 substantial differences in the foreclosure share between the
19 headliner unweighted and the headliner revenue weighted.

20 THE WITNESS: There are. They're both well in excess
21 of 30 percent. But, yes, I grant that there are differences.
22 And the differences are being driven, of course, by the revenue
23 weights. That when you take away the revenue weights, the
24 headliner foreclosure share is falling, but is smaller. But the
25 key, still, is that it's sufficiently high to create this

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1 presumption. It's something that could happen.

2 THE COURT: So unweighted, it's essentially driven by
3 the number of fighters?

4 THE WITNESS: The raw number, Your Honor, yes.

5 Exactly. It's just very simple. The numerator is Zuffa
6 fighters fighting pursuant to these potentially exclusionary
7 contracts, and the denominator would be all fighters in the
8 headliner market, but no weighting whatsoever. Every fighter is
9 treated the same.

10 MR. CRAMER: May I ask a clarifying question,
11 Your Honor?

12 THE COURT: Sure, just a moment.

13 But you also do see, then, a precipitous increase even
14 in the unweighted headliner --

15 THE WITNESS: Oh, yes.

16 THE COURT: -- foreclosure share. And is that in part
17 because of the Strikeforce acquisition and the number of
18 headliners that are in that acquisition?

19 THE WITNESS: Yes. Even Strikeforce -- Zuffa dominated
20 the headliner submarket prior to the Strikeforce acquisition.
21 But even within certain weight classes you'd see something,
22 like, there was a document I'm remembering saying 8 of 10, 7 of
23 10, 9 of 10.

24 THE COURT: Right.

25 THE WITNESS: And then post, it went up to 10 of 10, 9

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1 of 9, 10 of 10. So there was a -- there were headliners inside
2 of the Strikeforce portfolio at the time of the acquisition that
3 were brought over to Zuffa that even cemented Zuffa's complete
4 and utter dominance.

5 THE COURT: Right. And even if another competitor had
6 some control over headliners, as far as I understand it, there
7 was no cross-promoter fights. So you couldn't necessarily
8 leverage your lower number because you only have a smaller
9 number of fighters who can fight with each other in a particular
10 weight class, right?

11 THE WITNESS: That's correct. The hypothetical
12 suggests there were other headliners. For the most part, there
13 weren't. For the most part, Zuffa, post Strikeforce, took them
14 all. I could take you weight class by weight class for, like,
15 top 10, and it's almost 9 for 10, 10 for 10, 9 for 10, 10 for
16 10.

17 But even assuming counterfactually that there were some
18 highly ranked fighters out there, you're absolutely right that
19 Zuffa's unwillingness to engage in cross-promotion made life
20 even more difficult for the rival promotions because they
21 weren't able to offer up attractive fighting opportunities for
22 their -- for their pool of fighters.

23 THE COURT: So even if Zuffa had a lower unweighted
24 foreclosure share, because of the lack of cross-promotions, it
25 still would be able to dominate respective markets because it

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1 would limit the ability of the other promoters to be able to put
2 on fights with other headliners who were equally matched in the
3 same weight class?

4 THE WITNESS: I think I'm following, but just make sure
5 we -- you're asking me about a world without copromotion,
6 without --

7 THE COURT: No, no, no.

8 THE WITNESS: With copromotion.

9 THE COURT: No, no. I'm asking you for -- what I
10 understand is there was -- essentially wasn't copromotion in the
11 industry; that Zuffa and its competitors didn't essentially have
12 these cross-promoted fights, right?

13 THE WITNESS: Zuffa was unwilling to engage in
14 copromotion. Zuffa would not permit one of its own fighters to
15 go to a rival promotion. In contrast, smaller promotions at
16 what are called Zuffa out-clauses, in which case they would
17 allow --

18 THE COURT: Right.

19 THE WITNESS: -- their fighters to fight.

20 THE COURT: Those were people who were, essentially,
21 not going to be headliners -- headliners in the submarket,
22 right, because they're essentially fighting to get into the
23 below rankings of the headliner --

24 THE WITNESS: Correct.

25 THE COURT: -- submarket, correct?

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1 THE WITNESS: Zuffa had locked up the headliner market
2 post Strikeforce.

3 THE COURT: So what I'm asking you is that in the
4 context of the unweighted headliner foreclosure share, even if
5 the percentage is lower, the impact of that percentage is still
6 substantial because of the fact there's no cross-promotions in
7 the fights.

8 THE WITNESS: That's a very good point. Yes, as a
9 matter of theory it would be substantial, but we're not going to
10 end the proof there.

11 THE COURT: No, no, I understand that.

12 THE WITNESS: We're going to go and we're going to test
13 it. But you're right. The instincts are right. There could
14 be -- there could be -- there's a large potential for
15 anticompetitive facts.

16 THE COURT: All right. Thank you.

17 Go ahead, Mr. Cramer.

18 BY MR. CRAMER:

19 Q. My clarifying question was: To compare the unweighted
20 headliner to the weighted headliner, let me ask you a question.
21 Does the unweighted headliner, who will weight the person -- the
22 fighter ranked first in a weight class, the same as a fighter
23 ranked 15th in a weight class?

24 A. Correct.

25 Q. And a revenue weighted would probably rank those differently

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1 because the higher the rank, the more revenues they're
2 generating?

3 **A.** Correct. And the more likely they're with Zuffa, that's
4 correct. That's correct.

5 *Q.* So this difference between the revenue weighted and the
6 unrevenue weighted may be generated by the fact that when you
7 revenue weight, you're accounting for the fact that higher
8 ranked fighters are generating more revenues?

9 **A.** Correct. That's correct.

10 *Q.* And what's the purpose of that? Why would you want to
11 account for that?

12 THE COURT: Mr. Cramer, I actually understood it the
13 first time you did it. You don't need to go through that.

14 MR. CRAMER: Excellent.

15 BY MR. CRAMER:

16 *Q.* All right. At the risk of showing you something Dr. Topel
17 did, I just want to put this up for one minute.

18 Did Dr. Topel do his own analysis of foreclosure share,
19 Dr. Singer?

20 **A.** Yes.

21 *Q.* What is this?

22 THE COURT: So, Mr. Cramer, are you going to call
23 Dr. Singer on rebuttal after Dr. Topel?

24 MR. CRAMER: I do plan on doing that.

25 THE COURT: So let's wait until we do that.

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1 MR. CRAMER: Okay. Okay.

2 THE COURT: For this part.

3 MR. CRAMER: Yeah. I just thought it was important to
4 show Dr. Topel also --

5 THE COURT: I suspect you're going to ask him about it.

6 MR. CRAMER: You might be right.

7 THE COURT: And I suspect that Mr. Isaacson's going to
8 actually lead him through it, too. So why don't we go ahead and
9 just move onto -- again, because what I want in this portion of
10 Dr. Singer's testimony to make sure he has had sufficient time
11 to just provide foundational information to make sure that I'm
12 clearly understanding all of the different aspects of the
13 foreclosure share formulation and how it was used, and other
14 information that was used in conjunction with the foreclosure
15 share percentages to establish the conclusions that he reached
16 with respect to anticompetitive impact of Zuffa's policies.

17 So that's what I'd like to focus on.

18 MR. CRAMER: Thank you, Your Honor. That's what we
19 will do. One question, though.

20 BY MR. CRAMER:

21 Q. Does the foreclosure share that you measure or the
22 foreclosure share that Dr. Topel measures vary from class member
23 to class member?

24 A. Oh, no. Foreclosure's a market-wide phenomena. It's the
25 same for a class members.

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1 Q. All right. Let's talk about your impact regression in this
2 case. Your Honor's happy to finally hear these words, I'm sure.

3 What's the main variable you're trying to explain, the
4 dependent variable in that regression?

5 **A.** The dependent variable in the regression is the individual
6 fighter's wage share. So what the fighter got paid divided by
7 the event revenues that were generated in that event that was
8 showcasing the fighter.

9 Q. And what is the main independent variable here that you're
10 trying to use to potentially explain the changes in wage share?

11 **A.** That would be the foreclosure share.

12 Q. Okay. Do you have a slide illustrating the formula of your
13 impact regression?

14 **A.** I do.

15 Q. All right. So I got to find it. Here it is. All right.

16 Can you explain what this slide is depicting.

17 **A.** All right. So econometricians use the phrase left-hand side
18 variables and right-hand side variables. To explain what we're
19 trying to predict goes on the left-hand side, and the right-hand
20 side variables, as the name suggests, that sit on the right-hand
21 side, are the things we're going to use to try to assist us in
22 making the prediction.

23 So I've been talking about wage share as being the key,
24 left-hand side variable, and I define how I -- how I -- I define
25 how I get the variable for each observation, divide the wage

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1 level by the event revenue. That's on the left-hand side. And
2 I've been talking a lot about the foreclosure share today and
3 that being the key right-hand side independent variable.

4 What I haven't had a chance yet to talk about, and I'd
5 like to quickly, is just everything that went in on the
6 right-hand side that serves as a control variable. So the
7 databases that I was able to obtain, including one called
8 FightMetric, not to be confused with matrix, tells me everything
9 that happened about that fighter's history going up into the
10 fight and also what happened during the fight itself.

11 It turns out that those -- those very granular data,
12 number of punches thrown, number of punches landed, takedown,
13 submissions, those sorts of things turn out to be predictive of
14 what the fighter got paid, and also predictive of the wage share
15 generally.

16 I'm also including things like the fighter's -- oh,
17 sorry.

18 THE COURT: I just want to make sure. So the wage
19 share that you have here, the wage level includes the various
20 amounts of the compensation. So there was the different sort of
21 amounts a person gets for show, and other amounts that they
22 would get paid, but then there was also this sort of
23 discretionary amounts about -- that have to deal with top fight
24 or great takedown, things like that.

25 I assume all of that is captured in the wage level that

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1 you use in the formula.

2 THE WITNESS: Absolutely, including other categories,
3 whether the fighter got a piece of the Pay-Per-View action and
4 how big of a share he or she got.

5 THE COURT: So you -- the wage share incorporates all
6 of that, and then you might use the controls to try to just
7 aggregate it.

8 THE WITNESS: Try to explain variations. We're trying
9 to predict it as well as we can.

10 THE COURT: Right.

11 THE WITNESS: And just finally, just to very quickly,
12 in addition to all the things that happened in the fight, we
13 know what the fighter's rank was, the weight class the fighter
14 was in. We know something about the venue, the gender, whether
15 or not the fighter -- we control for Pay-Per-View, whether the
16 fighter participated in the Pay-Per-View pool.

17 And then these things called fighter fixed effects,
18 which is that we know that there might be something special
19 about the given fighter's identity. We want to control for that
20 and make sure the regression knows that he's seeing the same
21 time fighter -- the regression model is seeing the same fighter
22 in the same five or six or ten different events.

23 BY MR. CRAMER:

24 Q. And how do these control variables control for a variation
25 in your model?

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1 **A.** Well, they control for it because --

2 THE COURT: You don't you don't need to --

3 MR. CRAMER: Okay.

4 THE COURT: -- go into that. I mean, it's regression
5 analysis. They can -- it's either statistically significant and
6 they show an effect or they don't, I assume. Is that correct?

7 THE WITNESS: That's very good.

8 THE COURT: Okay.

9 MR. CRAMER: Excellent.

10 BY MR. CRAMER:

11 *Q.* Has Dr. Topel suggested that you left out important control
12 variables from this model?

13 **A.** He does to a degree. He does suggest later on in his
14 reports that there's a -- there's a key variable that I omitted
15 relating to what Zuffa is bringing to the table. That's the
16 promotional variable, and then eventually the all non-fighter
17 event variable.

18 But the main -- I would say the main bone of contention
19 is not -- at least initially, was whether or not I had set up
20 the equation correctly to begin with. That is, whether I had
21 used the wage share, whether that was the appropriate lens of
22 analysis.

23 *Q.* And we're going to get to -- again, just to cover again the
24 promotion and all non-fighter event costs in a minute. But
25 let's talk about the point you just made.

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1 Dr. Topel specifies a regression model that attempts to
2 measure the effect of increasing foreclosure share, but instead
3 of using wage share as the variable of interest, he uses wage
4 level. Do you agree with that?

5 THE COURT: Wage level.

6 MR. CRAMER: Wage level, right.

7 THE COURT: And increases in wage level -- I mean, the
8 part of it is trying to account for that in the context of
9 increase -- right.

10 So go ahead, Dr. Singer.

11 THE WITNESS: Let me just say back what I think you're
12 asking. The major difference in modelling is that Dr. Topel
13 wants to study the effect of the conduct through the lens of the
14 wage level.

15 THE COURT: The absolute level.

16 THE WITNESS: The absolute level. Right.

17 And in contrast, I want to study the effect of the
18 contrast through the lens of the wage share. And I think I have
19 a slide that will show you that.

20 THE COURT: That's all right. I understand the
21 difference.

22 BY MR. CRAMER:

23 Q. Does Dr. Topel ignore event revenues entirely?

24 A. Initially he did. But eventually he brought the event
25 revenues over to the right-hand side of the equation, and did

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1 control for them, or at least he tried to.

2 Q. Explain the difference between your regression formula and
3 Dr. Topel's regression formula as shown on the slides.

4 A. So this slide captures what I was just trying to say, but --
5 and state it as a formula. But if you just see what the event
6 revenue was entering in the denominator of my dependent
7 variable, and Dr. Topel has swung that around, taken it out of
8 the dependent variable, and added it on as a new explanatory
9 variable onto the model.

10 THE COURT: Did he do an interaction variable between
11 foreclosure share and event revenue?

12 THE WITNESS: He did not.

13 THE COURT: Okay.

14 BY MR. CRAMER:

15 Q. What if anything --

16 A. That's exactly where I was going next.

17 Q. Yeah, we have a question that goes right to this.

18 What, if anything, is Dr. Topel implicitly assuming by
19 putting a variable like event revenue on the right-hand side of
20 the equation as an independent variable, not an interaction
21 variable, but an independent variable?

22 A. He's assuming that it is an exogenous variable. That is to
23 say, he's assuming that it's not coming from the same place as
24 something that is simultaneously determining wage share.

25 Now, economists recognize this problem or this

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1 potential problem is as being the endogeneity problem or the
2 simultaneity problem. But in -- in broad strokes what it means
3 is he's -- he's not recognizing the distinct possibility, which
4 I think we showed at the very beginning of my slide
5 presentation, that there could be some unobserved factor that is
6 driving both the event revenue and the wage level. And, of
7 course, that unobserved factor is the marginal revenue product
8 of the fighters, right.

9 He is bringing over a variable onto the right-hand side
10 that is being determined simultaneously with the wage level.
11 That is, increases in fighter revenue productivity is going to
12 lift by his own admission event revenues and wages. And so this
13 is a -- this is a serious violation of these ordinary least
14 squares rules.

15 The other thing that I -- it's very important. There's
16 another --

17 THE COURT: So what is it that you would suggest that
18 his model should have done to account for the potential for that
19 relationship and that dependency, essentially, between those two
20 variables which are on opposite sides of that equation?

21 THE WITNESS: Well, I think the most elegant solution,
22 Your Honor, is to just leave the regression as it was. If you
23 keep event revenue on the left-hand side, then you eliminate the
24 endogeneity problem. Now I'm trying to predict the wage
25 described as a fraction of the event -- the event revenues.

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1 But if I could, there's something -- so endogeneity is
2 a fatal flaw, and it rules out doing it the way that Dr. Topel
3 did it. But there's an even more fundamental flaw that doesn't
4 require as much complication in econometrics and I'd like to say
5 it if that's okay.

6 BY MR. CRAMER:

7 Q. It's okay with me.

8 A. Okay. And that is when you put -- and it goes to your
9 interaction question, Your Honor. When you put event revenues
10 on the right-hand side, what Dr. Topel is doing is he's
11 dismissing the plaintiffs' anticompetitive theory of harm. The
12 anticompetitive theory of harm goes like this, that as more and
13 more fighters were foreclosed, were drawn into the net and
14 locked up and locked away from rival promotions, Zuffa was able
15 to alter the transmission mechanism that moved an extra dollar
16 of event revenue into the pocket of a fighter. That's the
17 entire theory of the case.

18 The theory of the case is that -- is that they have --
19 they have altered the transmission mechanism. But by putting it
20 over to the right-hand side, there's an independent variable.
21 He's presuming that increases in foreclosure share have no
22 effect on the mapping of event revenue into wage levels.

23 THE COURT: In other words, he's not testing the
24 theory.

25 THE WITNESS: Not only is he not testing. He's

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1 rejecting it out of the gate.

2 BY MR. CRAMER:

3 Q. All right. Thank you, Your Honor.

4 THE COURT: So what would be -- hold on. I want to go
5 back to this question. Assuming that he wanted to test the
6 extent to which there was a relationship between event revenue
7 and foreclosure share, other than including potentially an
8 interaction variable in the equation, what would be other
9 statistical methods that you might think that he would want to
10 do that were not done as it relates to being able to actually
11 test your model, at least to the extent that there is a
12 relationship between event revenue and foreclosure share which
13 would suggest a potential for some type of ability to control
14 the wage level --

15 THE WITNESS: Well, there's some obvious -- there's
16 some obvious things that we know just from a casually observing
17 the data, right, which is that a greater share of event revenue
18 was transmitted into wage levels in periods -- in the early part
19 of the study period when Zuffa's foreclosure share was low. And
20 later on in the study period when Zuffa's foreclosure share was
21 high, that transmission was at a lower rate.

22 THE COURT: Let me ask you this question. Is there --
23 are there differences in between how you all measured
24 foreclosure share?

25 THE WITNESS: No, but --

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1 THE COURT: Do he use your same definition --

2 THE WITNESS: He uses the same -- this is his way of
3 trying to upset my results. When he puts -- when he puts event
4 revenues on the right-hand side, he can undo the statistical
5 significance on the foreclosure share. But what he gets at the
6 end -- I mention this -- I'm trying to think of the technical
7 term for absurd. But he gets this relationship that implies a
8 100 percent increase in event revenue would only increase wages
9 by 8 percent. He thinks -- he thinks that is consistent with
10 competitive labor market, a 100 percent increase going up by 8
11 percent.

12 And my reaction to that is that it's not competitive,
13 and the reason why you're getting such a small effect is that
14 you've set up the model incorrectly.

15 THE COURT: Thank you.

16 Go ahead, Mr. Cramer.

17 BY MR. CRAMER:

18 Q. All right. Let's talk about the results of your impact
19 regression. In summary what does it show?

20 A. Well, it shows that there is a highly statistically
21 significant and economically significant relationship between
22 the foreclosure share and the wage share. And, importantly,
23 that result is carried over when I change the market definition,
24 as I toggle between the headliner, the tracked, the ranked, when
25 I change the weighting schemes, when I bring in the Strikeforce

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1 data. So it's a very robust result that -- that continuously
2 finds this very tight relationship between foreclosure share and
3 the wage share.

4 Q. So you ran versions of this model that included Strikeforce
5 data and it excluded Strikeforce data, correct?

6 A. Correct.

7 Q. And the one we're mainly presenting today is the one that
8 excluded Strikeforce?

9 A. Correct, excluded.

10 Q. Excluded, correct.

11 All right. How do you use the results of your impact
12 regression to determine what UFC fighters wage share
13 collectively would have been absent the challenged conduct?

14 A. Right. So once the model is fit and I have the model
15 parameters, I can then simulate a world in which everything is
16 identical, except for the foreclosure share. So if we want to
17 simulate that world, I want to pull back the exclusionary
18 contracts, right. If I -- if I do that, Zuffa's foreclosure
19 share will fall to zero, if I take them all out.

20 And then I can go back and predict what each fighter
21 would have received in a but-for world where the challenged
22 conduct is removed. Now, I do another simulation as well where
23 I tolerate a foreclosure share as high as 30 percent because my
24 understanding from the antitrust scholarship is that that could
25 be just at the level that's tolerable or acceptable by antitrust

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1 scholars.

2 Q. Is it -- so you -- did you assume or find a but-for world?

3 A. I assumed a but-for world.

4 Q. Right. And is it standard for an economist to assume a
5 but-for world in which the challenged conduct is pulled out?

6 A. In fact, that's what we do in all of my cases, whether it's
7 a price-fixing case or an exclusionary -- exclusive dealing
8 case. What we're trying to do is model a world where everything
9 is the same. It's the counterfactual. We're trying to model a
10 world where everything is the same except for the challenged
11 conduct.

12 Q. And did you prepare a slide that shows graphically how your
13 model toggles from the foreclosure share in the actual world to
14 the foreclosure share in the but-for world and how that affects
15 wage share?

16 A. I did.

17 Q. Okay. Let's look at that slide. What does this slide show?

18 A. So this -- this slide shows you diagrammatically this
19 relationship that I'm finding between foreclosure share on the
20 one hand and the wage share on the other. And what I can do is
21 I can move along a regression line where you can see that we
22 begin with a foreclosure share of around 80 percent, and that's
23 associated with the actual wage share of 19.5 percent. And then
24 I can project a but-for world in which the foreclosure share,
25 say, is set to 30 percent, to be conservative. And if I look

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1 up, I can see what the associated wage share is, which is 47.3
2 percent.

3 Q. And this red line effectively as you're graphing it is the
4 line that's predicted by your regression analysis?

5 A. In the aggregate level, that's correct.

6 Q. Okay.

7 All right. So fighters don't get paid in wage share.
8 They get paid in dollars. So was fighter pay in actual dollars
9 affected?

10 A. Oh, yes.

11 Q. All right. And how do you know that?

12 A. Well, to move --

13 THE COURT: How can one not be affected by the other,
14 Mr. Cramer? I don't understand.

15 MR. CRAMER: It's math.

16 THE COURT: They're getting paid in dollars. Right.
17 So if their wage share is affected, that would be affecting the
18 dollar, unless I'm missing something.

19 MR. CRAMER: No, you are right.

20 THE COURT: I'm trying to make sure if there's some
21 other point you're trying to make about that.

22 MR. CRAMER: No. Zuffa has raised issues with this so
23 we want to spell it out.

24 THE COURT: Okay.

25 MR. CRAMER: But we can move on.

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1 THE WITNESS: Okay.

2 THE COURT: Yes, I don't know that you need to explain
3 what the wages are paid in dollars if that's sort of --

4 THE WITNESS: No, but I actually think -- there's a
5 slightly more -- let me -- just can I say it?

6 THE COURT: Go ahead.

7 THE WITNESS: Quickly what you're trying to get at,
8 which is that if you're trying to project the but-for world and
9 you know the event revenues from that particular event, you're
10 just multiplying those event revenues now by a higher wage
11 share. And that's the translation into an actual wage.

12 THE COURT: Right. But that's based upon the
13 prediction of the particular rate and -- for the regression line
14 that was predicted by your model. In other words, it doesn't
15 have to be straight necessarily.

16 THE WITNESS: Uhm.

17 THE COURT: I mean, that's the only question I had
18 which, I mean, that's all you had. So obviously you have to --
19 in order to predict something else, you have to have other
20 information. Is there anything in your analysis that would lead
21 you to believe that it wasn't a straight line? Because that's
22 the only question I had about the but-for world is how do you
23 make those assumptions because oftentimes we don't always
24 observe perfectly straight lines in this context.

25 THE WITNESS: That's fair. I don't know if we've -- if

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1 we've tried specifications. I'd have to go back and see if
2 we've done log log specifications as opposed to just linear
3 specifications. Sitting here I can't recall.

4 But I just wanted to clarify one thing is that we're
5 going to go event by event, and we're going to take that event
6 revenue and figure out what the fighters in that event would
7 have made --

8 THE COURT: Right.

9 THE WITNESS: -- based on their regression
10 coefficients. And we're going to multiple it by the event
11 revenues, and we're going to have damages, the underpayment for
12 that one event. And then we're going to sum up the
13 underpayments across all events in the database to come up with
14 an aggregate damages number.

15 THE COURT: Right. But that's what you have done?

16 THE WITNESS: Yes.

17 THE COURT: Right.

18 BY MR. CRAMER:

19 Q. And we mentioned this earlier, but at the risk of reminding
20 the court here, how did you -- did you have any reality test
21 that you tested your but-for wage share of about 47.3 percent
22 against?

23 A. Well, I would say that one good reality test is what were
24 other promoters in the MMA industry paying their fighters as a
25 share of event revenues.

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1 Q. And, here, we have a slide. Can you describe what's on this
2 slide?

3 **A.** All right. So the 19.5 percent is the actual world. The
4 but-for world is 47.3. And as I said earlier, that is bound
5 from below by the Bellator wage share of 44.7 percent.

6 THE COURT: And this was in 2010 or '11, these figures
7 would be -- because this is obviously before --

8 THE WITNESS: This is --

9 THE COURT: -- the preacquisition of Strikeforce,
10 right?

11 THE WITNESS: For -- for Bellator and Zuffa these wage
12 shares are across the entirety of the class period.

13 THE COURT: Okay. All right.

14 THE WITNESS: For Strikeforce, of course, we couldn't
15 do that because Strikeforce goes out of existence post. So it's
16 for however long we had the data.

17 THE COURT: Okay. But there is a sort of a finite
18 period of time as relates to the Strikeforce which ends before
19 the end of the class period here.

20 THE WITNESS: Correct.

21 THE COURT: Because of the fact that it's acquired.

22 THE WITNESS: Correct, it disappears.

23 THE COURT: Right.

24 BY MR. CRAMER:

25 Q. So go ahead, Dr. Singer.

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1 **A.** I still think it is a good benchmark, but --

2 THE COURT: Well, I'm not saying that it isn't. I'm
3 just saying that I just wanted to clarify the fact that the
4 different percentages apply to different sort of lengths of time
5 in terms of what the average is for that period of time as it
6 relates to the wage share, correct?

7 THE WITNESS: Correct.

8 THE COURT: Okay.

9 BY MR. CRAMER:

10 **Q.** You raised this issue. Why do you think that Strikeforce
11 and Bellator would make good benchmarks here? Why would Zuffa,
12 absent the challenged conduct, you know, absent this
13 foreclosure, pay a wage share similar to what Bellator and
14 Strikeforce actually paid?

15 **A.** So, now think about what the world would look like if Zuffa
16 refrained from the challenged conduct, if Zuffa refrained from
17 locking its fighters into these long-term exclusive contracts.
18 You know, more free agency. You have more labor mobility. So
19 now the fighters get to play one promotion off of the other.
20 And in that -- in that scenario fighters can credibly threaten
21 to leave Zuffa and go over to rival promotions.

22 At that point Zuffa would have to respond
23 competitively, right, via increasing its offers and, hence,
24 increasing the wage share.

25 **Q.** All right. Let's discuss some of the attacks that Zuffa and

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1 Dr. Topel have directed at your impact regression. In his
2 second report Dr. Topel claims that your analysis, quote,
3 requires the assumption that athletes are the only material
4 drivers of revenues. Is that true?

5 **A.** It's not true. If -- if athletes were the only drivers of
6 revenue, then my but-for wage share would be 100 percent. The
7 fact that the but-for wage share is 50 of course allows for
8 contributions by Zuffa.

9 *Q.* But is it your view that the fighters are the primary or a
10 primary driver of revenues?

11 **A.** It still is my view that fighters are the primary, yes,
12 drivers.

13 *Q.* We looked at that study earlier today that I will not bring
14 back, but did that study -- did that study help you reach that
15 conclusion?

16 **A.** Yes.

17 *Q.* Okay. Another argument Dr. Topel makes is that your
18 foreclosure share is really measuring some procompetitive
19 conduct by Zuffa. Is Dr. Topel correct?

20 **A.** No. Remember how the foreclosure share is created and what
21 drives changes in foreclosure share. First of all, foreclosure
22 share is capturing the share of fighters who are locked into a
23 long-term exclusive contract. That is potentially
24 anticompetitive conduct. There's nothing -- there's nothing
25 procompetitive about that.

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1 If -- if those contracts were removed, the foreclosure
2 share would fall to zero, and if Zuffa went out and
3 procompetitively recruited based on business acumen or better --
4 better talents or whatever you could do to improve your
5 recruitment, the foreclosure share could be zero. Right. So
6 it's not -- it can't be confused with procompetitive conduct.

7 I wanted to say one more thing here, if that's okay.
8 You have to also just think about what's causing the foreclosure
9 share to move over time. Why is it growing? Is it growing
10 because of procompetitive? Is it growing because of
11 anticompetitive?

12 There's two big things that are causing it to move.
13 The first is the Strikeforce acquisition, which in my opinion is
14 anticompetitive. And the second thing that moves it around is
15 that the length of the contracts are growing over the class
16 period.

17 These are the things -- these are the anticompetitive
18 things that are driving movements in the foreclosure share. And
19 it's those movements that have the prospect of explaining
20 movements in the wage share. They're not procompetitive things
21 that are driving changes in the foreclosure share.

22 BY MR. CRAMER:

23 Q. If Zuffa had done a great job promoting and done a great job
24 of recruiting and caused a lot of fighters to join them, but
25 didn't sign them up to long-term exclusive contracts that tied

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1 them up and foreclosed them, what would the foreclosure share be
2 then?

3 **A.** Zero.

4 *Q.* And then your model would show no damages, right?

5 **A.** My model would show no damages, correct.

6 *Q.* All right.

7 Dr. Topel also claims that you fail to account for
8 Zuffa's procompetitive contributions to the growth of event
9 revenues in your regression analysis. Is that right?

10 **A.** No. I allowed for things outside of Zuffa's foreclosure
11 share, outside of Zuffa's market power, and it could also
12 explain a depressing effect on the wage share. And I originally
13 had things like time trends and your fixed effects and things
14 that I thought could be capturing changes, say, in the
15 popularity in the sport or changes in things that Zuffa was
16 adding over time that might explain the declines in wage share.
17 But we didn't stop there because --

18 THE COURT: So I'm sorry. What variables did you use
19 to test increases in the popularity of the sport? I know you
20 said you controlled for the promoter -- particular promoter one
21 way or another. Were there other variables in your analysis --
22 that you inserted into the analysis that deal with just
23 increased popularity of the sport?

24 THE WITNESS: I think the time trend, Your Honor,
25 would -- could capture increased popularity. We have year fixed

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1 effects which could capture increased popularity. We're
2 changing for the identity of the fire pools. So as different
3 fighters come into the mix or different fighters are being
4 looked in the regression, a more popular fighter, a more highly
5 ranked fighter, could be explaining variations in wage share.
6 But we didn't stop there. I just wanted to point out that we
7 also included the promotional spending variable. That did not
8 upset the regression. And then we included --

9 THE COURT: When you say "did not upset the
10 regression" --

11 THE WITNESS: Yes.

12 THE COURT: -- you should just define what that means
13 so we're making sure we're on the same --

14 THE WITNESS: Sure.

15 THE COURT: Obviously I would assume that means that
16 the -- there's statistical significance to the foreclosure share
17 and its impact on which -- I wasn't sure if there was something
18 else you were talking about.

19 THE WITNESS: I'm focussed like a laser on that
20 coefficient. I want to --

21 THE COURT: It's statistically significant and its
22 ratio as it compared to others? So do you look at -- because I
23 know -- I mean, there are two issues. One is the statistical
24 significance of it, how much variability is explained by that,
25 but also its relationship potentially of the coefficients to one

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1 another. And I don't know if you looked at that or not in terms
2 of the magnitude of their effect.

3 THE WITNESS: I'm interested -- it's like they're all
4 my children. I'm interested in all of them, but I want -- I
5 want to focus -- I want to focus your attention on the
6 foreclosure share.

7 If the foreclosure share remains to be statistically
8 significant and negative as we include more and more variables,
9 right, then we have greater confidence that we have controlled
10 for everything we need to. So that's --

11 THE COURT: But the model would also -- including the
12 size of the coefficient, would potentially determine how much it
13 impacted the wage share in comparison to other variables,
14 correct?

15 THE WITNESS: Correct. And we discussed earlier when
16 we included the Strikeforce data, remember?

17 THE COURT: Right.

18 THE WITNESS: The size of the coefficient grew because
19 now we have a second contribution, a variation, a second source
20 of variation, that we can exploit to inform the size of the
21 foreclosure share.

22 THE COURT: So what I'm asking you is you're not
23 completely discounting the size of the impact even if it's
24 statistically significant?

25 THE WITNESS: That's correct. I'm not. And of course

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1 my damages are going to turn, in part, on how big that
2 coefficient is.

3 THE COURT: Okay. So I just want to make sure we're
4 not throwing the size of the coefficient out or putting it on
5 the side when you say disrupt the results. You're saying there
6 is statistical significance to foreclosure share, and it also in
7 terms of its impact is maintaining a significant impact in the
8 context of its impact on the wage share as well.

9 THE WITNESS: Correct.

10 THE COURT: Okay.

11 BY MR. CRAMER:

12 Q. The judge asked you, Dr. Singer, His Honor asked you about
13 how you control for the increased popularity of the sport. Let
14 me ask you this question. If the sport was -- if the sport of
15 MMA, the popularity was increased generally, what would that do
16 to the MRP, marginal revenue product, of the fighters?

17 A. It would increase the MRP of the fighters.

18 Q. And so if it increased the MRP of the fighters, what would
19 that say about -- would that help explain -- let me ask it this
20 way.

21 What would that say about what the competitive wage
22 level would be?

23 A. Well, I think that that would not provide an explanation for
24 a falling wage share because if -- if what -- if what happened
25 over the time period is that the sport became more popular, as

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1 you said, that would be consistent with an increase in the
2 marginal revenue product of the fighters. And that -- at a
3 minimum the wage share should not drop. In order to come up
4 with an explanation for the special sauce theory, you have to --
5 you have to conceive of something that is contributing more and
6 more to revenue at a faster rate than the contribution to
7 revenue of the fighters.

8 THE COURT: In the model would that look like a
9 decreasing coefficient for the individual fighter's statistical
10 impact as well as a decreasing -- I'm trying to think of what
11 that would look like in terms of how the variables over time --
12 because we also have this time-released variable -- how they
13 would change as relates to the percentage of the predictive
14 value or ability to predict the wage share. What would it look
15 like if that actually was happening? If you saw that, what
16 would it look like?

17 THE WITNESS: I think the way that it would look like
18 is that if you could come up with this special sauce variable,
19 what it would do is it would take away the explanatory power of
20 the foreclosure share. I think the way that it manifests itself
21 is that it would soak away explanatory power of the foreclosure
22 share, and Dr. Topel has not been able to do that.

23 THE COURT: Okay.

24 BY MR. CRAMER:

25 Q. You mentioned this, but why would Zuffa's non-fighter

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1 contributions to growth of event revenues have to go -- grow as
2 fast or faster than the fighter's contributions to event
3 revenues for Zuffa's theory to make sense?

4 **A.** Because you have to explain a falling wage share, and the
5 only way that could happen is if something -- in a
6 procompetitive way. And the only way you could do that is if
7 there was this other factor.

8 THE COURT: An accompanying increase.

9 THE WITNESS: Exactly.

10 BY MR. CRAMER:

11 *Q.* And has Zuffa ever articulated what specific management
12 practices constitute these procompetitive activities that are
13 becoming more significant over time to revenue growth relative
14 to the fighter's contribution to revenue growth?

15 **A.** No.

16 *Q.* Is Zuffa's procompetitive special sauce theory that there's
17 this growing contribution to event revenues faster than the
18 contribution of the fighters going on consistent with your
19 understanding of the MMA industry?

20 **A.** No, it is not.

21 *Q.* Why not?

22 THE COURT: That's actually a fairly long, complex
23 answer that he goes through in his report. So, again, what I'd
24 like to do, Mr. Cramer, is it seems like you're moving almost
25 directly into rebuttal of Dr. Topel's report. And I would like

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1 to save that --

2 MR. CRAMER: Okay.

3 THE COURT: -- for actual rebuttal from Dr. Singer. So
4 if you have nothing else, because I don't want this to eat up
5 the time, I'd like to turn this over to opposing counsel to
6 begin their cross-examination.

7 MR. CRAMER: Your Honor, the one main thing we haven't
8 covered -- we've covered now the impact regression and how it
9 showed a falling wage share. We haven't yet gotten to common
10 impact, how it was spread across the class, and a discussion of
11 how he used his regression and other analyses to explain common
12 impact. I think that's important and --

13 THE COURT: I think it's important, too. But, again,
14 when we're going passed some of the time limits and I get
15 concerned. I will tell counsel, too. We have to end at
16 4 o'clock today for technology reasons related to us having to
17 shut our system down, and we're going to start a little bit
18 earlier tomorrow. But why don't you get right to that,
19 Mr. Cramer, and I'll give you 20 minutes. Then I'm going to
20 turn this over to opposing counsel.

21 BY MR. CRAMER:

22 Q. Okay. Dr. Singer, can describe your two main methods of
23 showing that the challenged conduct had a widespread effect
24 across the class?

25 A. All right. I used two methods. The first method is that

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1 I -- once I have a model that's fit to the data, I can go back
2 and make individual predictions for each fighter and then
3 compare what the fighter was paid per my model in the but-for
4 world to what the fighter was actually paid. And if there was
5 an underpayment, I can determine that that fighter suffered
6 impact.

7 The second method, which I call the pay structure
8 method, begins with the same regression impact model, but then
9 looks for proof both in the record and my own original
10 empiricism, which suggests a pay structure binds the payment of
11 all of the fighters together through some knowable objective
12 factors.

13 THE COURT: Like a pay scale.

14 THE WITNESS: Like a pay scale.

15 BY MR. CRAMER:

16 Q. All right. Before we get to the pay scale, can you
17 describe -- so is your model capable, your regression model,
18 capable of showing impact to all or nearly all class members?

19 A. Yes.

20 Q. What does -- what is -- what are the results of your
21 regression model in terms of showing impact to all or nearly all
22 class members? What does it show?

23 A. So when I take -- when I take the model after it's fit and I
24 go and predict for each fighter what their but-for payments
25 would have been and compare it to their actual payments, I find

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1 that between 98.5 and 99.1 of class members suffered antitrust
2 injury.

3 Q. And there are a handful of class members, 12, that did not
4 suffer injury at least according to that model? Or your model
5 doesn't find suffered injury. Does that undermine your model?

6 A. It doesn't undermine my model, no.

7 Q. Okay. Did you devise this method of using a regression
8 analysis to show common impact across a class yourself or is
9 that a standard method?

10 A. It's a standard method. And I'm aware of cases in which
11 it's been used and accepted by courts.

12 Q. Zuffa accuses you of using average foreclosure rates instead
13 of computing individual foreclosure shares for each fighter.
14 Does this criticism make sense in the context of your common
15 impact analysis?

16 A. There's no such thing as an individual foreclosure share.
17 So I have a hard time following that one.

18 Q. All right. Let's talk now about your second method. So
19 that's your first method. It uses the regression to show common
20 impact. Now, does the second stand on its own independent
21 method -- and you mentioned that it involves a pay structure.
22 By pay structure do you mean some kind of formal rigid salary
23 scale or something else?

24 A. Something else.

25 Q. And what do you mean?

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1 **A.** What I mean is that there are knowable objective factors
2 that explain differences in payments across employees of a firm
3 or in this case across something closer to an independent
4 contractors within a firm.

5 THE COURT: Such as for a fighter, their ranking?

6 THE WITNESS: Exactly.

7 THE COURT: Or their weight class?

8 THE WITNESS: Exactly. So it suggests that comparably
9 -- comparable employees with comparable experience and
10 comparable tenure and comparable skills would be paid comparable
11 amounts.

12 BY MR. CRAMER:

13 Q. Did you prepare a slide with some record evidence showing
14 that Zuffa believed they had some kind of basic formula for
15 compensation?

16 THE COURT: So, Mr. Cramer, you don't need to have
17 Dr. Singer go through all the summary of the actual records
18 regarding Zuffa employees making references to pay scales and
19 pay structures. If you want to go through his analysis as it
20 relates to analyzing the sort of common proportional movement of
21 the wages up or down, fine. Let's do that. But I don't need
22 Dr. Singer to review for me, you know, comments from the various
23 match makers at UFC about what their scale was and how they
24 tried to keep pay equity. That's what Mr. Silva's testimony is
25 for. And I know he does that already, Dr. Singer, in his actual

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1 report anyway. But I don't think that would be beneficial. So
2 if you are talking about what's statistical work he does --

3 MR. CRAMER: Okay.

4 THE COURT: -- in relation to that, which he does do
5 separate from the pay scale, let's move to that.

6 MR. CRAMER: Fair enough.

7 BY MR. CRAMER:

8 Q. What empirical analyses did you do to confirm that there was
9 some -- at least an informal pay structure that bound the
10 salaries of the compensation of fighters together?

11 A. I did two. In the first approach I identified these
12 knowable objective factors such as Pay-Per-View, such as the
13 fighter's rank, the weight class, the gender. And I was able to
14 show that these knowable objective factors were highly
15 predictive in what a fighter got paid. That suggests again the
16 existence of a pay structure.

17 The second approach was at any point in time I
18 regressed what an individual fighter made on what all other
19 fighters were making at the same time. And it turned out
20 knowing what everyone else was making did a very good job in
21 predicting what an individual fighter made as well.

22 Q. All right.

23 Did Dr. Topel conduct an analysis in his reports, a
24 statistical analysis, that you believe confirm a price
25 structure?

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1 **A.** Yes. Dr. Topel did perform a similar analysis looking at
2 movement in Zuffa fighter pay over time and found that there was
3 a connection across -- across fighters at a given point in time.
4 That is, they were all connected and moving upwards.

5 Q. In every salary scale, in every fighting wage tier -- in
6 every ranking tier?

A. In every ranking tier, that's correct.

8 Q. So he found that wages in every ranking tier moved together
9 through time?

10 | A. Correct.

11 Q. Okay. Now, does Dr. Topel's opinion that fighter
12 compensation levels rose over time contradict your finding that
13 fighters were ultimately undercompensated?

14 | A. No.

15 Q. Why not?

16 **A.** Because it's conceivable that compensation was rising
17 slightly, but it wasn't rising enough to be commensurate with
18 the event revenues that were being generated by the fighters.

19 MR. CRAMER: The last thing I would cover would be
20 damages, but those are mathematical computations flowing from
21 Dr. Singer's model.

22 THE COURT: Well, I don't know -- I think he's actually
23 covered the damages based upon what he talks about as it relates
24 to the but-for world, and that regression line that we saw would
25 predict what the damages would be filing in the formula, unless

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1 I'm missing something.

2 MR. CRAMER: That's correct.

3 BY MR. CRAMER:

4 Q. Maybe, Dr. Singer, could you just describe this slide so we
5 can --

6 THE COURT: No, I understand. I just wanted to make
7 sure that would be the basis, right, for the damages
8 calculation; in addition to you then I think also used what were
9 the percentages for the different actual MMA promoter
10 competitors in the market at different periods of time, right?

11 THE WITNESS: That's correct.

12 THE COURT: All right.

13 MR. CRAMER: So, again, we have about class damages.
14 They're 894 million under the model that we presented without
15 the Strikeforce data. They're more with the Strikeforce data.
16 And then we also ran it if you started the class period at the
17 Strikeforce acquisition.

18 THE COURT: Right.

19 MR. CRAMER: They go down a slight amount. And then
20 here would be the damages using the two benchmarks, Your Honor.

21 THE COURT: Okay.

22 MR. CRAMER: With that, Your Honor, unless you have
23 other questions for Dr. Singer, we will rest.

24 THE COURT: Okay. That's fine.

25 We're going to transition and transition with the

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1 inputs. Why don't we -- and I need to just take a very short,
2 five, 10-minute recess. And then we'll come back and get
3 everyone set up and start with the cross.

4 (Recess taken at 2:47 p.m.)

5 (Resumed at 2:57 p.m.)

6 THE COURT: Please be seated. All right. Go ahead,
7 Mr. Isaacson.

8 MR. ISAACSON: Thank you, Your Honor.

9 **CROSS-EXAMINATION**

10 BY MR. ISAACSON:

11 Q. Good afternoon, Dr. Singer.

12 A. Good afternoon.

13 Q. So if I can ask you -- if we can pull up your slide 69,
14 which is your common impact -- common impact two methods. And
15 you pretty much wrapped up with method B, the pay structure
16 part. And now in method A and in method B, you begin with an
17 impact regression. That's the regression that we were looking
18 at in Table 6, page 125 of your report. Maybe you remember that
19 with all of the coefficients?

20 A. I remember that, but if you might remember, that today's
21 presentation was based on a model without the Strikeforce data.
22 So to the extent that you're taking me to the model with the
23 Strikeforce data, that was not part of today's presentation.

24 Q. Okay. Well, let me understand that then. If we could look
25 at slide 70.

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1 This is what you just presented as your individual
2 impact. That does include the preacquisition Strikeforce data,
3 right?

4 **A.** I don't think so. I think my entire model today was
5 premised on the model without -- the regression model without
6 the preacquisition Strikeforce data.

7 **Q.** You think those numbers exclude the preacquisition
8 Strikeforce. Is that --

9 THE COURT: So why don't we do this, Mr. Isaacson,
10 because it would be helpful for me. Let's use his actual
11 reports.

12 MR. ISAACSON: That's what -- I'm about to go to that.

13 THE COURT: That might be helpful. That way I have it
14 in the record and --

15 MR. ISAACSON: Sure. Let's go to -- I'm about to go to
16 -- back to page 125.

17 THE COURT: Of the original report?

18 MR. ISAACSON: Of the original report.

19 THE COURT: Okay.

20 MR. ISAACSON: But let me just ask you about this.

21 BY MR. ISAACSON:

22 **Q.** So going back to slide 69. The impact regression, which
23 we'll come back to, the impact regression is what defines any --
24 generates an amount of impact on an individual fighter, correct?

25 **A.** No. The impact regression is used to establish a general --

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1 a generalized effect across all fighters, but that's step one of
2 the two-part proof of common impact.

3 Q. Right. So pay structure does not generate an amount of
4 injury for a fighter?

5 A. No, that is not the purpose of the pay structure.

6 Q. Right. The one that generates a dollar figure eventually is
7 the impact regression, and it's the one that generates 99
8 percent and it's the one that generates damages?

9 A. I think what you're asking me is to describe method A as
10 opposed to method B. It is true that under method B, the method
11 that uses the pay structure, I don't get to a number like 99
12 percent. I get to a number of 100 percent.

13 THE COURT: And when we're talking about pay structure,
14 let's make sure we're clear about when you mean pay structure
15 you're not talking about your reliance upon pay structures that
16 are in the record. You're talking about a different type of pay
17 structure. What do you mean by that?

18 THE WITNESS: Oh. Well, this is important, Your Honor,
19 that my pay structure is based on two types of evidence,
20 original quantitative analysis --

21 THE COURT: Right.

22 THE WITNESS: -- two types, in conjunction with
23 qualitative analysis from the record in which Zuffa employees,
24 among others, are explaining how the pay structure operated.

25 THE COURT: And just again just so that I'm clear, how

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1 does that pay structure determination work?

2 THE WITNESS: Oh. How does it work in practice at
3 Zuffa?

4 THE COURT: No, no. Well, I understood that part
5 because that's in the record. But in terms of how it works in
6 terms of your inclusion in accounting for the common impact.

7 THE WITNESS: All right. So in the second proof or
8 what I call method B --

9 THE COURT: Right.

10 THE WITNESS: -- right, you need to marry up two pieces
11 to get across the finish line. The first piece is from the
12 impact regression gives you a generalized wage effect. That
13 shows you that across all members of the class there's a
14 generalized suppression of wages. And then --

15 THE COURT: Based upon?

16 THE WITNESS: Based upon the impact regression model,
17 that regression model that we discussed today, the one of wage
18 share on foreclosure share.

19 THE COURT: Right. Okay.

20 THE WITNESS: Regressed on everybody in the class.

21 THE COURT: And controlling for the different variables
22 you control for.

23 THE WITNESS: But that only gets you -- that only gets
24 you to a generalized the effect. The coefficient on foreclosure
25 share tells you that something is happening in general, but it

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1 doesn't necessarily speak to all or almost all members of the
2 class.

3 So from my second proof of common impact, method B, I
4 have to have something that bridges us from a generalized effect
5 to an effect that we know and are confident that touched all or
6 almost all, and that's what the existence of a pay structure is.
7 I'm following the proof as outlined by Professor Leamer in
8 high-tech antitrust litigation that was certified recently by a
9 court and in which this two-step method -- and I've used it
10 myself in other cases as well, where you establish a general
11 effect and then you marry that up with evidence of a pay
12 structure. And the two combined let you know that all or almost
13 all members of the class were injured.

14 THE COURT: Okay. All right. Thank you.

15 BY MR. ISAACSON:

16 Q. And for each method, in order to show actual injury or
17 impact to any individual, you need the impact regression.
18 That's all I'm saying.

19 A. Oh. That's fair. For method A and method B you definitely
20 need to begin with the impact regression model.

21 Q. Okay. So let's go to Table 6 of your opening report which
22 is page 125. It's on the screen for you.

23 THE COURT: It's also on the screen to your right.

24 THE WITNESS: Okay.

25 BY MR. ISAACSON:

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1 Q. And it covers a page and a half. So let's just scroll it so
2 that -- we won't be able to show the whole thing at once, but
3 just so that everybody understands what it is.

4 All right. We were sort of looking it at it on the
5 ELMO earlier. It's the same one. So if we go back up to the
6 top, all right, these dependent variables is the fighter share.
7 That's what you've told us. Foreclosure share you've got for
8 tracked, ranked, and headliner.

9 Now, those numbers there, those are the coefficients
10 that result from the regression for -- from the foreclosure
11 share; those are not the actual foreclosure shares?

12 THE COURT: Okay. Hold on just a moment. When you say
13 -- I just want to be clear. It says fighter share here. You're
14 talking about fighter wage share?

15 THE WITNESS: Correct. Yes.

16 THE COURT: Make sure we're talking about the same
17 thing.

18 I'm sorry. Go ahead, Mr. Isaacson. I just wanted to
19 make sure.

20 MR. ISAACSON: Okay. That's why --

21 BY MR. ISAACSON:

22 Q. And the numbers next to the foreclosure share, the negative
23 3.3 percent. I'm rounding there a little bit.

24 A. Yes.

25 Q. In the tracked market. So that's the negative -- that's not

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1 the amount of foreclosure share?

2 **A.** No, that is the incremental effect of a small increase in
3 foreclosure share on the fighter wage share controlling for all
4 other variables that I controlled for in the model.

5 **Q.** So you find a negative relationship there between
6 foreclosure share and the fighter share in each of those
7 markets, correct?

8 **A.** Correct.

9 **Q.** Okay. Now, all of the other -- all of these coefficients
10 that are listed there, as explanatory variables, these are the
11 things you described as being on the right-hand side of the
12 regression; whereas, the fighter shares is on the left-hand
13 side?

14 **A.** That's correct.

15 **Q.** And for each of these what we're looking at are
16 coefficients. Some are significant. Some aren't. Some are
17 positive. Some are negative. But what relationship the -- the
18 regression found between those variables and -- and the fighter
19 share?

20 **A.** Correct.

21 **Q.** So, for example, if we look at win flag, a couple of down
22 from foreclosure share, now that's whether you win a fight,
23 right?

24 **A.** Correct.

25 **Q.** And what you find there is it's not predictive of an effect

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1 on fighter's wage share because the amount is very small and
2 it's not statistically significant. Is that correct?

3 **A.** Well, I grant you that it's small.

4 *Q.* And just to be clear, when it's statistically significant
5 you put an asterisks by it depending on what the levels are?

6 **A.** Correct.

7 *Q.* So where we're looking at something that doesn't have
8 asterisks, it's not statistically significant?

9 **A.** Oh. That is correct. I was -- I was looking at wins. I'm
10 sorry. Win flag, yes.

11 *Q.* And for the same reason -- for the same thing the rank
12 there, where you rank, that did not show a statistically
13 significant relationship to -- to the fighter share, correct?

14 **A.** In this -- in this particular iteration of the model -- you
15 know that I have many, of course, but if you're taking me to
16 Table 6, I agree with you that the ranked variable does not have
17 an asterisk next to it, indicating that it's not statistically
18 significant at conventional levels. It still could be
19 important, but it doesn't have T-step large enough or a P-value
20 small enough that would fit under, say, 10 percent statistical
21 significance.

22 *Q.* And moving down just a couple to PPV, that's Pay-Per-View,
23 right?

24 **A.** Correct.

25 *Q.* And so what the regression finds without statistical

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1 significance, that if you're in a Pay-Per-View event, that
2 actually has a negative relationship to fighter share?

3 **A.** Yeah. We see from that first chart -- you remember,
4 Mr. Isaacson -- that showed the level of exploitation was even
5 higher for Pay-Per-View events.

6 **Q.** Right.

7 **A.** And so that's consistent with this finding as well.

8 **Q.** All right. So if we go to the next page. All right.
9 There's a trend variable near the bottom right above constant.
10 You talked about the trend variables. And that has a positive
11 relationship and statistically significant relationship to wage
12 share?

13 **A.** Correct. Yes, that's --

14 **Q.** So there's a trend going on that's having a positive effect
15 on the -- on the fighter share?

16 THE COURT: What does that -- what is the definition of
17 that variable?

18 THE WITNESS: It's a time trend, Your Honor.

19 THE COURT: Measured how?

20 THE WITNESS: Oh. So for the first year of the
21 database or the first month of the database, it would take on a
22 value of one. And then it would go up by one in each successive
23 time increment.

24 THE COURT: But the trend is measured in years?

25 THE WITNESS: I believe the trend could be measured in

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1 months. It's either in months or years. I just can't recall.

2 BY MR. ISAACSON:

3 Q. It's less than -- it's not years. I believe it is months.

4 And it's a linear trend, correct?

5 **A.** Correct.

6 Q. So it measured linear trends. And what this would mean is
7 that holding all else constant that fighter share was
8 increasing, if you remove that trend?

9 **A.** I don't know what you mean by remove the trend. It shows
10 you that the coefficient on the time trend is time clicked
11 forward.

12 Q. Right.

13 **A.** That the wage share was predicted to go up, all things
14 equal. This is key, all things equal. In other words, if the
15 wage share had not been depressed as much as it was by the
16 foreclosure share, then what we should have seen was an upward
17 increasing trend in the wage share, but we didn't.

18 Q. Right. What you're saying is that there was a trend of
19 increasing fighter share that was going on, but in your opinion
20 it should have been a higher amount?

21 **A.** That's not what I'm saying.

22 Q. Okay. Well, let me ask you to look at -- this is a portion
23 of Dr. Zimbalist's report. This is a chart. So this is --
24 Dr. Zimbalist is an expert for the plaintiff. The report --
25 this is a Table 4-E. It's from his errata. So he did some

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1 corrections on it. It's JCCX 47.

2 MR. ISAACSON: Can you pull that up for me.

3 I need Table 4. It's JCCX 47, Table 4-E. Yeah, here
4 we go. All right. So turn that. Make it bigger.

5 BY MR. ISAACSON:

6 Q. And you see this is Dr. Zimbalist's reporting fighter share
7 in event revenue. And from 2010 to 2016 it's rising from 15.2
8 percent to 22.2 percent. Overall during the class period
9 fighter share as expressed in event revenue was trending
10 upwards, correct?

11 A. I'm not -- I Wouldn't accept that it was trending upwards,
12 no.

13 Q. Okay. Well, it wasn't --

14 THE COURT: So let's talk about -- again, the same as
15 with Dr. Topel -- I mean, Dr. Topel, although Dr. Singer and
16 Dr. Topel are more directly in opposition. I don't want to go
17 through him analyzing the Dr. Zimbalist report because there are
18 different foundations and different assumptions for the reports
19 that lead to different outcomes. So I don't find that to be
20 significant, Mr. Isaacson. So I'd move on from there.

21 MR. ISAACSON: Okay. Well, what I do believe this is
22 completely consistent with his trend variable, which is why I
23 was showing it to him. The -- that there is a trend going on
24 that the trend variable is capturing of an increasing fighter
25 share. And, whereas, it's been to described to you this morning

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1 that there's a trend, absent the controls. They are arguing
2 that it should have been higher. I'm not trying to take that
3 out of the proposition.

4 THE COURT: Right.

5 MR. ISAACSON: But I'm trying to explain to you that
6 during the class period not only was fighter pay going up, but
7 also fighter share was going up and that has some importance in
8 this case. All right. In fact --

9 THE WITNESS: Your Honor, may I respond?

10 THE COURT: Okay. So I'm sorry. So your argument is,
11 Mr. Isaacson, that the statistically significant trend variable
12 from Dr. Singer's report would indicate that fighter share was
13 going up over time independent of foreclosure share?

14 MR. ISAACSON: Right, and that variable is taking that
15 out. And I'll spend some more time on this.

16 THE COURT: Well, okay. But let's let --

17 THE WITNESS: May I respond to this?

18 THE COURT: -- Dr. Singer respond to that.

19 MR. ISAACSON: Well, can I show him something --

20 THE WITNESS: Mr. Isaacson --

21 THE COURT: No, no, no. Let him respond to that first,
22 please.

23 THE WITNESS: What Mr. Isaacson is missing is that my
24 regression database does not start in 2010. My regression
25 database starts around 2003, 2004, 2005. And there is a clear

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1 and unmistakable decline in the wage share over the study period
2 in question by your own client's chart that I put up on the wall
3 at the very beginning. Your client showed it at 26 percent in
4 2007, and we watched it step down into the 20s, then slightly
5 below 20, and then it flattened largely, I'll grant you that,
6 over the course of the class period.

7 THE COURT: So what is that trend variable capturing as
8 it relates to positive impact of wage share over time?

9 THE WITNESS: What the trend variable is capturing is
10 that I would say that controlling for all other things that are
11 occurring, including the depressing effect of the increasing
12 foreclosure that's growing over time, that what should have
13 happened is that -- is that the wage share was predicted to have
14 gone up over time, but that didn't happen.

15 THE COURT: Well --

16 THE WITNESS: That actually during the class period it
17 stayed flat over the class period.

18 THE COURT: Okay. So what you're saying is -- I want
19 to make sure I'm understanding. Well, first, you had earlier
20 said that the time which would -- variable, which is the trend
21 variable here, would be some measure of an increase in the
22 popularity of the sport, right?

23 THE WITNESS: It could capture that. It could capture
24 anything that's trending over time. It doesn't have to be
25 just --

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1 THE COURT: So, in other words, it may capture hidden
2 variables that are correlated with time.

3 THE WITNESS: Correct.

4 THE COURT: Going forward in time.

5 THE WITNESS: Correct.

6 THE COURT: And as I take it one of your arguments
7 you're making is, one, is that it doesn't change the factor.
8 There's still a negative impact with respect to the depression
9 of the wage share by the foreclosure share notwithstanding the
10 existence of the significant time trend variable.

11 THE WITNESS: Correct. But I'm making a bigger point
12 which is that my regression was fit on a database that spanned
13 well before the class period. I had observations from '5, '6,
14 and '7. And it was from '7 -- '7 was really the peak of the
15 wage share. So it's incorrect for Mr. Isaacson to suggest that
16 over -- over my study period, which predated that 2007 peak,
17 right -- he says that it was always rising over my study period.
18 That is incorrect. It is a mischaracterization of what was
19 happening to the wage share over my study period.

20 THE COURT: Right. So let's focus on the same period
21 that we have here. So from 2010 through 2016 is the wage share
22 increasing?

23 THE WITNESS: I would describe it more if I -- if you
24 force me to choose between increasing or decreasing or flat, I
25 would go with flat. Over the -- over the class period, it was

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1 largely flat. It would bounce around, but it was staying around
2 19.5 percent.

3 THE COURT: Okay.

4 THE WITNESS: The declining trend that is informing in
5 part my model is the rapid decline that began in 2007 and went
6 through, you know, 2010.

7 THE COURT: Okay. Go ahead, Mr. Isaacson.

8 MR. ISAACSON: All right. Can we look at ZCX302A, just
9 the fighter share column.

10 BY MR. ISAACSON:

11 Q. All right. So this is the summary exhibit we disclosed to
12 the other side, and so I assume you've seen this?

13 A. It's wrong, but I've seen it. It's wrong, but I've seen it.

14 Q. So let me ask -- so, first of all --

15 THE COURT: So let's not -- again, I don't want to use
16 summary exhibits that he has not produced. If you want to
17 reference findings from his report, then you should use --

18 MR. ISAACSON: This is --

19 THE COURT: -- charts in his report.

20 MR. ISAACSON: This is drawn from his data.

21 THE COURT: No, no. No. I want you to use his actual
22 charts. I don't want you to use separately created summary
23 reports. That is not helpful to me. He's going to do exactly
24 what he's done here, which I would expect Dr. Topel to do the
25 same thing, which I didn't create it. There may be different

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1 assumptions. I don't know where this data comes from.

2 And so if you want to attack and make the same -- I
3 made the same instruction to Mr. Cramer -- use the particular
4 report or charts that he has.

5 MR. ISAACSON: Okay. Your Honor, but I will say, okay,
6 he does know where this data came from and he does know whether
7 this is accurate or not. And --

8 THE COURT: Well, did he do these calculations?

9 MR. ISAACSON: No, because his --

10 THE COURT: So then I don't want you to ask him about
11 calculations that he did not perform. Dr. Topel can talk about
12 his own calculations. Dr. Singer can talk about his
13 calculations, but I'm not in a position and I don't think it's
14 appropriate for me to try to evaluate other calculations that
15 were not performed by these individuals because I don't think
16 that that allows me to be able to suss them out. If you want to
17 use his information or have him comment on another report like
18 you did with Dr. Zimbalist, I don't necessarily mind that, but I
19 don't want to get into this back and forth about --

20 MR. ISAACSON: Okay.

21 THE COURT: -- summary statistics that were not
22 produced by any of the experts.

23 MR. ISAACSON: All right. Can I -- just to -- I'm not
24 going to talk about the substance of this, but I think there's
25 one thing the Court would want to know.

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1 BY MR. ISAACSON:

2 Q. So the last chart had fighter share expressed -- the sort of
3 numbers you were thinking of: 15 percent, 18 percent, 20
4 percent. And these -- these are all much lower. Now, when
5 you're doing fighter share in your regression, you're doing the
6 individual fighter shares at the revenues, not the global group
7 of fighter? So like when you talk about 20 percent fighter
8 share, you're talking about all of the fighters, but when you're
9 running your regression, you're running individual fighter
10 shares, which might be 1 percent or 2 percent?

11 A. I am using the individual fighter share, but I am not using
12 this jerry-rigged data where each event --

13 THE COURT: You don't have to comment about it.

14 Dr. Singer, let me stop you. You don't need to comment on it.
15 If you want to clarify what your numbers are, then you can do
16 that, because that's part of the reason why I don't want to go
17 back to these other numbers is because we get into this back and
18 forth about these other numbers that are not in the report.

19 So why don't we move on from there.

20 MR. ISAACSON: I just wanted you to understand the
21 difference between how his regression is doing it and these 15,
22 20 percent numbers we've been tossing around.

23 THE COURT: I'm sorry. Say that again.

24 MR. ISAACSON: So when he's running his regression, I
25 think he disagreed with me, he's using individual fighter

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1 shares. So their share at an event, which might be 1 percent,
2 because it's one person, as opposed to the collective group.

3 THE COURT: I'm sorry.

4 MR. ISAACSON: So when --

5 THE COURT: So when you say he's using the individual
6 versus the aggregate amount --

7 MR. ISAACSON: Yes.

8 THE COURT: -- perhaps, you can be more clear because
9 I'm not sure I'm understanding what you're trying to point. You
10 can ask him.

11 MR. ISAACSON: Sure. So let's pull up demonstrative 1,
12 the fighter share chart.

13 BY MR. ISAACSON:

14 Q. All right. I think you said this is -- in terms of how you
15 calculate fighter compensation share, it's individual
16 compensation over the amount of event revenue?

17 A. I think that's fair. In my regression model an individual
18 observation, as I testified earlier, was what -- what a
19 particular fighter was paid in a given event and divided by that
20 amount revenue.

21 Q. So that's one person at one event?

22 A. Correct. The model is fit at the individual fighter event
23 pair level.

24 Q. And the event revenue is a single event?

25 A. For each observation it's a single event.

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1 Q. Right. So -- and then for foreclosure share, which would be
2 the next demonstrative --

3 MR. ISAACSON: Let's see if we've got this right.

4 Should be number two. Yes. All right.

5 BY MR. ISAACSON:

6 Q. So it's the number -- the numerator would be the number of
7 Zuffa fighters, I'll come back to plus or minus nine months,
8 with 30-month contracts, right?

9 A. That's -- that's a shorthand. You know that there's more to
10 it than that, but that certainly they had -- the duration of the
11 contract had to exceed 30 months. But we also required there to
12 be a champion's clause. We also required -- among other things,
13 but you're right. 30 months was critical. That's correct.

14 Q. Right. And the -- now, the plus or minus nine months
15 means -- so if I took a month such as an event in October 2012,
16 you didn't actually track who had contracts in October 2012.
17 You looked at who was fighting around that month, and you went
18 nine months before and nine months after.

19 A. I wouldn't put it that way. I just didn't like the
20 beginning of it. We did look at what the contract was at the
21 time they were in the relevant market. And you couldn't be in
22 the relevant market for a certain period of time unless you
23 fought either nine months before that time or nine months after,
24 and if we're doing the ranked, which I assume you are, you
25 are -- you are actually a ranked fighter. You had the rank at

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1 that time of somewhere between 1 and 650.

2 Q. Just sticking to plus or minus nine months. So October
3 2012. So if I fought within the nine-month period after that, I
4 would -- I would be in the numerator for the October 2012 event?

5 A. Only if you were a Zuffa fighter and you fought pursuant to
6 a contract that contained those three provisions that I consider
7 to be potentially exclusionary. And if --

8 Q. And --

9 A. Just a few more. And if you were in the relevant market.
10 So if we're looking in the ranked, you'd have to have a rank at
11 the time, and your promoter would have had to put on an event in
12 North America.

13 Q. Yes. And so in terms of the plus or minus nine months, so
14 if we're -- for October 2012 -- for October 2012 -- for doing
15 the foreclosure share in October 2012, if I fought in January
16 2013, but didn't sign a contract until November 2013 -- November
17 2012 and I didn't have a contract in October 2012, I would still
18 be included in the numerator?

19 THE COURT: Hold on.

20 THE WITNESS: I couldn't follow that.

21 THE COURT: I'm not sure I followed that. And was
22 there anyone -- Zuffa fighters that were fighting without
23 contracts?

24 MR. ISAACSON: No, but --

25 THE COURT: So I don't know why we're doing a

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1 hypothetical.

2 MR. ISAACSON: You can fight nine months late
3 afterwards and not have a contract on the date. So you can
4 fight nine months after October 2012 and not have a contract on
5 October 2012.

6 THE COURT: But did that actually happen?

7 MR. ISAACSON: Yes. Sure.

8 THE COURT: I mean, I'm not aware -- no. When you say
9 sure, you're saying that there were -- there were fighters who
10 were fighting without contracts --

11 MR. ISAACSON: No.

12 THE COURT: -- during fights?

13 MR. ISAACSON: No. So I'll -- so because of the plus
14 nine months.

15 THE COURT: Right.

16 MR. ISAACSON: Right. So I can -- I can sign a
17 contract three months afterwards, fight eight months
18 afterwards --

19 THE COURT: Right.

20 MR. ISAACSON: -- and be counted in the foreclosure
21 share for October 2012.

22 THE COURT: Oh. Right.

23 MR. ISAACSON: Right. And going backwards for nine
24 months, right, I can fight eight months beforehand, have my
25 contract lapse four months beforehand, and can counted in

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1 October 2012.

2 BY MR. ISAACSON:

3 Q. Do I have that right?

4 A. I'm not sure I'm following.

5 THE COURT: I'm not sure I'm following either. And,
6 Mr. Isaacson, were there ever Zuffa fighters who fought without
7 contracts?

8 MR. ISAACSON: That's not my point.

9 THE COURT: But that's my question.

10 MR. ISAACSON: No. No. Of course not.

11 THE COURT: Okay. So why would I consider that in
12 terms of your point if the fact is they were always under
13 contract one way or the another and the contract includes these
14 clauses? I want to understand why it is you're saying this is
15 significant.

16 MR. ISAACSON: Because the foreclosure share is not
17 using whether you were contracted on the date that there -- that
18 they're calculating the foreclosure share.

19 THE COURT: Why does that matter if they were still
20 under contract and couldn't fight unless they fought pursuant to
21 the terms?

22 MR. ISAACSON: Because the numbers don't match the real
23 world and --

24 THE COURT: Yeah, but it wouldn't -- but it wouldn't
25 exclude their inclusion within the contract in the context of

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1 their -- of the ability of the contract to control their
2 fighting results.

3 MR. ISAACSON: But the regression -- right. He's
4 also -- okay. So the result is you actually count for, say,
5 October 2012 fighters who are contracted for other promoters
6 because of -- so if I fought eight months beforehand and I moved
7 four months later to Bellator, on October 2012 I'm counted as a
8 Zuffa fighter.

9 If -- likewise, if I'm fighting for Bellator on
10 October -- if I've contracted with Bellator on October 2012, I
11 leave Bellator, and I sign with Zuffa three months later, and I
12 fight six months -- you know, six months later, I'm being
13 counted as a Zuffa fighter in the foreclosure share.

14 THE COURT: Okay. And so do we have the numbers -- and
15 maybe this is what you're getting to. I'll go back to the
16 reports -- of the number of fighters who actually fought, who
17 went from Zuffa to Bellator -- because, first of all, it's
18 mostly Bellator after 2011. Do you have that number that you
19 think are overrepresented somewhere that I can look at to be
20 able to say that the foreclosure share isn't accurate, which is
21 -- foreclosure share isn't accurate, which is what I understand
22 you to be suggesting?

23 MR. ISAACSON: I'm going to let Dr. -- I wanted to
24 establish the facts now, and we'll let Dr. Topel answer that
25 okay.

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1 THE COURT: Okay. So you're going to provide that
2 portion of it?

3 MR. ISAACSON: Right. Part of this -- what I'm trying
4 to achieve here is to get on the same page as to what's happened
5 as to how this regression works.

6 THE COURT: Right. And so I guess what you want to
7 point out is that the foreclosure share captures fighters who
8 may in fact in a given moment in time not actually be under
9 contract to Zuffa. Is that right?

10 MR. ISAACSON: That is one point that we will
11 eventually make.

12 THE COURT: Okay. And so in that sense you're saying
13 the foreclosure sale -- foreclosure share may be sort of
14 overestimating, right, the extent to which Zuffa had this
15 control because there are fighters who are included who
16 shouldn't be included. Is that what you're saying?

17 MR. ISAACSON: The way I would put it is it's not
18 actually trying to measure the relationship that it says it's
19 trying to measure. That if foreclosure is not actually
20 foreclosure, then it's not measuring the relationship -- the
21 relationship he's captured -- he's capturing --

22 THE COURT: But other than the time, what else are you
23 talking about?

24 MR. ISAACSON: That's what --

25 THE COURT: Okay. But, no, when you're saying it

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1 doesn't actually capture, right now you're focussed on time, are
2 you going to say there are other things as well?

3 MR. ISAACSON: Yes.

4 THE COURT: Okay. I wasn't sure, in terms of what
5 you've done so far, there's something else I should be gleaning
6 besides, at least for now, if there may be fighters who are
7 captured who have actually moved onto a different promoter.

8 MR. ISAACSON: There will be other things, and I will
9 do one thing at a time.

10 THE WITNESS: Your Honor --

11 THE COURT: Okay. No. That's fine. I just want to
12 make sure I get each point in time. And certainly I want to
13 make sure I understood that.

14 Dr. Singer.

15 THE WITNESS: I just want to say that I've never seen a
16 sensitivity analysis of this kind to my foreclosure share. I
17 would think that if it was really sensitive to these scenarios
18 that he's laying out, I would have seen an analysis by Dr. Topel
19 that says had it had -- had Dr. Singer done it this way, the
20 foreclosure share would drop precipitously. But it sounds like
21 maybe this is a preview of some fresh and new analysis.

22 THE COURT: We'll get to what it's -- I'm sure they're
23 going to -- they're not going to keep us in suspense too long,
24 hopefully. We'll figure this out.

25 Go ahead, Mr. Isaacson.

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1 BY MR. ISAACSON:

2 Q. All right. Now -- and the denominator -- the denominator
3 is, instead of being Zuffa fighter, it's all fighters? Within
4 your markets. When I say "all fighters," it's within whatever
5 market we're talking about?

6 A. I think that's fair.

7 Q. And you're weighting both the top -- the numerator and the
8 denominator. You're weighting the Zuffa fighters by Zuffa
9 revenues, weighting the denominator for the non-Zuffa promoters
10 by their -- by their revenues?

11 A. It's not exactly right, and of course that would only apply
12 to the revenue-weighted market definitions.

13 Q. Right. But the -- for calculating -- for doing your impact
14 regression, you used the weighting?

15 A. Not for the presentation I did today. And certainly -- no.
16 I'd answer no. That's not the --

17 Q. For the calculation of actual injury which is Table -- let's
18 go to Table 8 of your report.

19 THE COURT: What page? Is this the original report?

20 MR. ISAACSON: It would be first report, page 155.

21 BY MR. ISAACSON:

22 Q. There is -- I'm going to look at 155. There is an errata
23 that changes the numbers slightly, but I don't think it's
24 material. So for simplicity I'm just looking at page 155.

25 A. Mr. Isaacson --

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1 THE COURT: Okay. Hold on. Let me him ask the
2 question, Dr. Singer. I want to make sure I'm understanding the
3 question, too.

4 BY MR. ISAACSON:

5 Q. All right. The -- for purposes of this calculation, you
6 used -- this derives from the impact regression either with --
7 including the Strikeforce or excluding the Strikeforce?

8 A. I'd have to go check because this is a key point. I do it
9 every way.

10 Q. Right, but you do -- you do this weighted, correct?

11 Table 8 is you use the weighted?

12 A. I'm not sure I did because it doesn't say that I used the
13 weights. This is for the headliner market definition. You
14 recall that I do one iteration of headliner without any weights.
15 I do a headliner version with ranked weights. I do a headliner
16 version with revenue weights.

17 Q. So --

18 A. My results, in terms of the share of the impacted signers,
19 are not sensitive to the weights.

20 Q. Now, when you say they're not sensitive, you mean the
21 coefficients, the negative coefficients for the foreclosure
22 share?

23 A. I was actually talking about the share of injured fighters.
24 That is, you're going to get into the high 90s based on any path
25 that you take.

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1 Q. All right. Let's see if I can get us on the same page here.

2 MR. ISAACSON: Can we go to the demonstrative that's
3 for Dr. Singer, first report, Table 8.

4 THE COURT: Where is this in the report?

5 MR. ISAACSON: This -- this is like the -- my other
6 thing where I did foreclosure share. This is my attempt to see
7 if we can agree on what this means. This is not our -- this is
8 not intended to be argumentative.

9 THE COURT: Okay. Well, I mean, if he agrees. Again,
10 part of this, Mr. Isaacson, and the reason why I'm instant upon
11 this is when I go back to write my decision, it's helpful for me
12 to have these references. And so these things that are created
13 for the purpose of the testimony are not necessarily helpful
14 without providing the context. So for both doctors they give a
15 lot of context and they give footnotes and other things. When
16 I'm looking at a chart, I understand what the assumptions are
17 and what the factors are.

18 MR. ISAACSON: There's no assumptions here. When they
19 wrote out their formula for you in their slides, this is my
20 attempt to do the same thing. That's all that's going on here.
21 All right. There are no results here.

22 THE COURT: Okay.

23 MR. ISAACSON: Okay?

24 BY MR. ISAACSON:

25 Q. Now, when you're -- this is like when I showed you wage

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1 share and foreclosure share. I'm trying to find out if we got
2 this right, how you calculated it.

3 So when you're calculating individual injury, okay, the
4 individualized injury that went into Table 8, you're -- you're
5 doing a prediction of what they would actually -- what they
6 should have made and you're subtracting what they actually made?

7 **A.** Correct.

8 Q. And, now, the negative .33 here is the coefficient we looked
9 at in your table -- in your -- we looked at it for the tracked
10 market for the -- for the relationship between foreclosure share
11 and wage share. There was a negative .33. Do you remember
12 that?

13 **A.** I seem to recall that coefficient, yes.

14 Q. And whatever number here you used, this is just an example.
15 And so the .3 is -- is the 30 percent foreclosure share that you
16 assume in the but-for world. You explained that in the but-for
17 world you're saying, well, some antitrust scholars and courts
18 have said 30 percent is okay.

19 THE COURT: But that's not this number.

20 MR. ISAACSON: That's .3 is --

21 THE COURT: No, they're the same number, but you're
22 talking about different numbers, right. This is based upon a
23 regression analysis --

24 MR. ISAACSON: This is not regression. This is math.
25 This is not the regression.

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1 THE COURT: Okay. I'm confused then. So I thought you
2 were saying this .033 came from the table on 125.

3 MR. ISAACSON: Yeah, it's the result of the regression.

4 THE COURT: Right. Okay. So that's the coefficient
5 for the foreclosure share.

6 MR. ISAACSON: We're taking this coefficient, okay, and
7 he's running a new regression. In order to get the predicted --
8 what the fighters would get in the predicted but-for world, and
9 you can correct this --

10 THE WITNESS: I'm going to correct it because --

11 THE COURT: So why don't we just ask him what the
12 actual formula is that he used because it's actually in his
13 report. I don't --

14 MR. ISAACSON: No, no, no. It's not -- it's not in any
15 simple way. I mean, there's pages and pages of things.

16 THE COURT: Yes, but --

17 MR. ISAACSON: Not in a way that you and I can
18 understand.

19 THE COURT: Well, maybe we should try to figure that
20 out because what I'm saying to you is that I don't know that
21 this helps me; because if he's saying that that's not what he
22 used, what we're going to have -- Mr. Isaacson, the reason why
23 I'm saying use his reports, he's going to say that's not exactly
24 what I used. And then where are we?

25 MR. ISAACSON: I'm going to correct this to do what he

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1 says he used.

2 THE COURT: Okay. All right. Maybe it will help then.

3 Go ahead.

4 MR. ISAACSON: I'm trying to be helpful, Your Honor.

5 BY MR. ISAACSON:

6 Q. So for the prediction, you run your regression. So going
7 back to Table 125 -- page 125.

8 So for the prediction you run this whole regression
9 again, this regression with all of these variables and all of
10 these coefficients, for each fighter with a different
11 foreclosure share. Is that right?

12 A. I don't rerun the regression, no.

13 Q. Okay. I'm using the wrong term saying rerun the regression.
14 You use the coefficients in this table to calculate a predicted
15 fighter wage?

16 A. Correct.

17 Q. Thank you.

18 And only --

19 THE COURT: And how do you do that?

20 BY MR. ISAACSON:

21 Q. You use a lower foreclosure share, right?

22 THE COURT: Well, no, I want to actually know -- maybe
23 he can explain in basic terms.

24 THE WITNESS: Sure.

25 THE COURT: What do you do with the coefficients? And

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1 as it relates to going -- this predicted versus actual injury to
2 come up with what would be the suppressed wage share. So how
3 did you do that?

4 THE WITNESS: Correct. So can we go back? Because
5 this is wrong. But can we go back to the prior page? I take
6 these coefficients --

7 THE COURT: Right.

8 THE WITNESS: -- right. And I know for a given fighter
9 event pair all of what these right-hand side variables were in
10 the actual world. For a given observation in the database, I
11 know everything about that fighter that was used for the
12 prediction.

13 THE COURT: So you do a summation?

14 THE WITNESS: I do a simulation. Simulation.

15 THE COURT: Oh.

16 THE WITNESS: Right. A simulation of what that fighter
17 would have gotten in the but-for world.

18 THE COURT: Right.

19 THE WITNESS: Everything has kept constant except for
20 the foreclosure share. So I have a prediction. I have a
21 prediction of what that fighter would have made in the but-for
22 world. And I compare -- at a given event, and I compare it to
23 what that fighter was paid in the actual world. And for most of
24 the fighters, in fact the vast majority of fighters, you are
25 able to show an underpayment. There is a small tail of a

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1 distribution of fighters who were very, very well compensated in
2 the actual world --

3 THE COURT: So in the simulation what goes into the
4 individual fighter pay characteristics that allows you to make
5 that calculation?

6 THE WITNESS: Everything that was on the right-hand
7 side of the regression, Your Honor, everything, all of those
8 attributes. We have a vector of attributes about the fighter
9 going into the fight and what he or she did at the fight:
10 punches thrown, takedowns, whether --

11 THE COURT: So you try to account for all of those
12 variables in the actuals. So, in other words, you say, okay,
13 there is impact on the wage share based upon punches thrown. So
14 we're going to put that in as part of the actual.

15 THE WITNESS: We know -- we know -- yes, we know
16 everything that actually happened. We have -- just think of
17 this as an excel spreadsheet. And we have all of the data for
18 each of the right-hand side variables for a given observation of
19 that data. Right.

20 THE COURT: Right.

21 THE WITNESS: And now we can go ahead and predict using
22 these -- Mr. Isaacson likes this one a lot, but I don't. Can we
23 go back to the one before?

24 THE COURT: But it doesn't matter what we use --

25 THE WITNESS: Well, those coefficients --

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1 (Court reporter interruption.)

2 THE COURT: It doesn't matter which diagram we use. I
3 think what Mr. Isaacson trying to sort of get at and which I
4 certainly would want to also understand is what is it -- as best
5 you can explain in terms of those of us who don't look at the
6 somewhat complex formulas you have, what is it you did to be
7 able to capture what was the actual amount that would have been
8 the wage share and then what's the predicted change? And it
9 seems we agree the prediction is based largely on the
10 coefficient of the foreclosure share. Is it based upon anything
11 else?

12 THE WITNESS: Everything. It's based on everything on
13 the right-hand side. It's based on all of the coefficients in
14 that prior slide that he keeps taking away. It's based -- the
15 prediction is based on all of the coefficients; not just the
16 foreclosure share coefficient; on all of the coefficients.

17 THE COURT: Okay. So then do you -- do you take for --
18 in terms of the actual, is that based upon an actual event that
19 is a data point in the --

20 THE WITNESS: Exactly.

21 THE COURT: Oh, okay.

22 THE WITNESS: Exactly. And we know what the fighter
23 got paid in the actual world. The trick is to try to estimate
24 what the fighter would have been paid --

25 THE COURT: Got it.

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1 THE WITNESS: -- in A world where the foreclosure share
2 was zero or 30 percent. And the model gives us a whole set of
3 parameters and say multiply these parameters by the actual
4 values on the right-hand side. And now I can predict I need to
5 do one tweak, which is where the foreclosure share was 80
6 percent or 90 percent, we're going to change that down to, say,
7 30 percent or 0 percent. Then we go to make the prediction, and
8 then we're going to compare the predicted wage to the actual
9 wage. And if the prediction comes out higher, we can -- we can
10 infer that that fighter suffered impact in that event.

11 THE COURT: Got it.

12 MR. ISAACSON: So I actually think we got this line
13 correct based on what he said.

14 THE COURT: So here's what I'm going to tell you, this
15 is not helpful to me at all because I actually don't --

16 MR. ISAACSON: Can I --

17 THE COURT: -- I don't think it captures -- what he's
18 describing is a very complex way of going about doing this in
19 terms of as it relates to each event and how it calculates the
20 factors. This does not help me, Mr. Isaacson, at all.

21 MR. ISAACSON: Can I just explain to you what we did
22 here, though? The other coefficients is everything he said on
23 the right side. That's what it means and --

24 THE COURT: But, no, Mr. Isaacson, you're trying to
25 simplify things --

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1 MR. ISAACSON: The other thing is the tweak.

2 THE COURT: But, Mr. Isaacson, you're trying to
3 simplify things that can't be simplified. I do think the tweak
4 is something that he can describe, if you want to have him
5 describe that. But the fact of the matter is these variables
6 are going to change based upon the fighters and the events. And
7 so I understand that you want to focus on certain aspects of the
8 tweaks. Let's talk about that.

9 But this is not I think an accurate simplification
10 based upon what Dr. Singer is describing to me of what happens.
11 Now that's not to say you can't make arguments about whether or
12 not that a tweak is an appropriate way to predict common injury,
13 which I take what part of your point is. But let's focus on why
14 or why the tweak isn't appropriate.

15 MR. ISAACSON: All right.

16 THE COURT: Because this isn't helping me.

17 MR. ISAACSON: Right. All right. Well, we got to the
18 point of learning from this that it's a tweak plus all of the
19 other coefficients, which is what I wanted the Court to know.

20 THE WITNESS: But that slide is inaccurate because it
21 suggests --

22 MR. ISAACSON: He doesn't want --

23 (Court reporter interruption.)

24 THE COURT: So, Mr. Singer, you don't have to respond
25 if there's no question.

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1 MR. ISAACSON: Right. The slide is inaccurate.

2 THE COURT: I understand, but the slide's not admitted.

3 But here's the other thing. It doesn't really matter -- this

4 goes for any of the lawyers. The lawyers can't actually

5 testify, right, as much as they would like to, right. That's

6 going to be you and Dr. Topel for both sides and the remaining

7 experts.

8 So if Mr. Isaacson or Mr. Cramer makes an argument

9 about what they think the data means, that's fine. They're

10 entitled to do that. That doesn't mean that I accept that. And

11 if it's not in the question, you certainly don't need to respond

12 to it because, otherwise, we'll be here all day with that

13 because I don't think that's important at this point.

14 But, Mr. Isaacson, so I'm saying that in part because I

15 think what would be helpful is if you're trying to focus on how

16 you think the tweak as it relates to the coefficients is

17 improper or for some reason not valid, then let's talk about

18 that.

19 MR. ISAACSON: Can I just -- he said something else,

20 though. Because when he said he subtracted the actuals, I just

21 want to go over that. Right.

22 BY MR. ISAACSON:

23 Q. When you subtract the actuals, what -- you don't just go and

24 get the actual amount that was paid. First you go through your

25 formula with all of the coefficients, keeping the original

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1 foreclosure share, and then you compare that to the actuals, and
2 then -- and then make them equal, right? You do -- you go
3 through the process of using the higher foreclosure share -- the
4 untweaked formula and see what compensation you got?

5 **A.** It's not exactly how I'd put it, but maybe we're iterating
6 to the commonplace. We're going to fit the model using the
7 actual data that we observe in the world, including these very,
8 very high foreclosure shares. We get a set of parameters that
9 come out of the model. Now we can go back and make predictions
10 on a fighter-by-fighter basis of each event as to what that
11 fighter would have been paid if we make one change. That is,
12 when we go to make the prediction, we're going to set the actual
13 foreclosure -- we're going to show the value of the foreclosure
14 for that fighter not at what it was, but either zero or 30
15 percent. It is a simulation. And it will tell you what the
16 fighter would have been paid. What I'm --

17 THE COURT: Then when you did that, did you then sum
18 that sort of difference across all of the events for a
19 particular fighter?

20 THE WITNESS: Well, we're doing it a fighter/event
21 pair. So an observation in the database, Your Honor, is a
22 fighter/event pair. It's a fighter who performed at a
23 particular event.

24 THE COURT: Right.

25 THE WITNESS: And so we're going to go fighter event,

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1 fighter event, fighter event. There's thousands of them.

2 THE COURT: That's how you did the pairing.

3 THE WITNESS: And for this proof of impact method A,
4 we're making predictions of what that fighter at that event
5 would have been paid, and we're comparing it to -- to what he or
6 she actually was paid.

7 And this is a very important point. The other
8 coefficients that he has up on the screen, the other variables
9 in the model are not just canceling each other out. The other
10 coefficients, the other variables, are playing a very important
11 part in the --

12 THE COURT: That's what I understood from your
13 explanation.

14 THE WITNESS: Okay.

15 BY MR. ISAACSON:

16 Q. All right. So -- and so when you do the actuals, I think
17 you just said this, you do the simulation and then -- so using
18 the actual foreclosure effect. You say here's what my model
19 shows that they actually made. And then your computer says,
20 well -- say you predicted 9,000. The computer says, no, they
21 made 10,000. And then you add in at the end a residual for that
22 \$1,000 difference?

23 A. No, that's not what I do.

24 THE COURT: That's not what he just -- that's not what
25 he's describing what he's doing. So --

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1 BY MR. ISAACSON:

2 Q. So you're saying you actually used the -- you just went --
3 you went in and found out what each fighter paid and subtracted
4 that actual amount?

5 A. Let me try it again. I have a prediction of what the
6 fighter would have been paid at a given event in a but-for world
7 where the foreclosure share was zero or 30, and I compare it to
8 what the fighter actually made. If that difference shows an
9 underpayment, then I consider that fighter to have been injured.
10 Sometimes, very rarely for 12 of the fighters, that you cannot
11 show impact for a very, very small. And it turns out the reason
12 why you can't is for this very, very small handful at the tail
13 of the distribution, they were paid so much in excess of what
14 every other fighter got, including those in the cohort, that the
15 regression can't understand why it is they did so well. And it
16 appears as if they escaped injury, and this is important, only
17 under that model. It is not my opinion that those 12 fighters
18 actually escaped injury. I think they were injured. Just using
19 this method A, you're always going to get a little bit of a
20 tail, right, that can't be shown to have suffered injury.

21 BY MR. ISAACSON:

22 Q. So -- but when you say I compared it to what the fighter
23 actually made, I just -- I want -- you just looked at what the
24 contract says they got paid?

25 A. No.

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1 Q. Right, that's what --

2 THE COURT: No. What I understood is that what Mr. --
3 Dr. Singer did was based upon the fighter/event pairing he came
4 up with a statistical model. He then went back after he came up
5 with the model with the coefficients and then did a simulation
6 where he used the actual pairing event, and then he changed the
7 coefficient for -- for the foreclosure share.

8 MR. ISAACSON: Okay.

9 THE COURT: The 30 percent or zero. Is that right?

10 THE WITNESS: I left the coefficient the same. I just
11 changed the value of the foreclosure share from 80 or 90,
12 whatever it was at the time I'm making the prediction in the
13 actual world, to zero or 30 percent.

14 THE COURT: Right.

15 THE WITNESS: But I left -- the coefficient came from
16 the first step. That stays the same. The coefficient tells you
17 what the relationship is between --

18 THE COURT: Right.

19 THE WITNESS: That stays. That stays in the
20 simulation.

21 THE COURT: I'm sorry. You're right. So you saying
22 that was for the variable. Okay.

23 BY MR. ISAACSON:

24 Q. It's a comparison of two simulations. I think we got it.

25 THE COURT: Okay. Mr. Isaacson, here's what I'm

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1 saying. You repeating that doesn't tell me that that's what
2 your point is.

3 MR. ISAACSON: I thought that's what he just said.

4 THE COURT: No, no. But, no, again that's actually not
5 what he's saying. So part of it is I want to try to understand
6 your point, but what I understand is that Dr. Singer conducted
7 this statistical analysis and he used that then to do a
8 simulation. But the simulation involved actual data that he --
9 that the simulation involves him changing the value as it
10 relates to the variable for the foreclosure share variable.
11 That's what I understood him to be saying.

12 So when you -- I don't understand him to be saying he's
13 doing two simulations. He's not doing two simulations. So I'm
14 not understanding -- when you're saying he's doing two
15 simulations, I don't understand what you mean by that. Because,
16 as I understand it, both experts, at least in this pairing, used
17 actual data. Is there something else that I'm missing,
18 Mr. Isaacson?

19 MR. ISAACSON: I asked him -- so to subtract -- to my
20 mind, to subtract an actual, you just go get the actual and
21 subtract it, right. The fighter made \$100,000 at the event.
22 You subtract \$100,000.

23 THE COURT: Right.

24 MR. ISAACSON: That's not my understanding of how
25 they -- they calculated the actual.

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1 THE COURT: Right, I think I just explained how he
2 calculated the actual. And I guess what I'm trying to
3 understand is what is it that you are arguing that you think is
4 problematic about how that was actually done.

5 MR. ISAACSON: Now that we've established that
6 foundation, I'm going to let Dr. Topel explain that because he
7 will do a better job of it than I could.

8 THE COURT: Okay. I wasn't sure if there was something
9 about the questioning, Mr. Isaacson, that I -- that I was
10 missing. I assumed that Dr. Topel is going to get up here and
11 say things that are very different than Dr. Singer. Otherwise,
12 we wouldn't have two opposing parties.

13 MR. ISAACSON: But also part of this is to get -- one
14 part is to have him explain what he did.

15 THE COURT: Right. Okay.

16 BY MR. ISAACSON:

17 Q. Now, the -- you mentioned what's in the foreclosure effect.
18 It's the 30-month contracts plus the champion clauses. As I
19 think you've told before, the champion clauses are almost always
20 present. It's really the 30-month contracts that are driving
21 those to regression?

22 A. I think that it's fair to say that what's causing it to
23 change over time is the fact that Zuffa is inching up the
24 duration of the contracts. That's correct. You'll see
25 champions clauses early on in the class period.

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1 Q. Right. There's one necessary element for a foreclosure
2 effect and that's the 30-month exclusive contracts?

3 A. I wouldn't say there's one necessary. We need -- we require
4 all three.

5 Q. All right. So at your -- I don't want to go into like
6 cross-examination impeachment excessively, but at your first
7 deposition I asked you and we can show -- you have your
8 depositions in front of you there if you want to look at it in
9 the binder, but I will show you on the screen. First
10 deposition, 268, page -- line 11. I asked you: So there's one
11 necessary element for a foreclosure effect, and that's the 30
12 month or more exclusive contracts, correct? Answer --

13 A. Well, there is a different topic.

14 Q. Answer: Yes.

15 A. It's a different topic. Can I explain?

16 THE COURT: Well, but here's what I think it will be
17 helpful. Let me give this guidance to all counsel, which is
18 that I'm going to rely upon the explanations in the reports for
19 both sides. So that's why I had said to Mr. Cramer,
20 Mr. Isaacson, sort of pulling out portions of Dr. Topel's
21 testimony also isn't helpful for me because the reports provide
22 the overall context. I don't think it's helpful to pull out
23 just portions of the deposition, unless you can point to how
24 what's in the deposition is actually part of the model.

25 Because in the model and in the report he actually,

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1 Dr. Singer, and so does Dr. Topel, explains what's in their --
2 his determination of the -- of this foreclosure variable. And
3 it isn't just the 30 months. It actually talks about other
4 factors. Both of them talk about multiple factors.

5 And so I'm saying that to you because pulling this out
6 for me doesn't somehow contradict what is written in the actual
7 report, which is why I wanted to focus on that.

8 MR. ISAACSON: So I believe I am focusing on the
9 foreclosure effect variable. And I think he has said that the
10 only thing that matters for that foreclosure effect is the
11 30-month contracts.

12 THE COURT: No, that's not what he says in the report.
13 The report goes through -- that's why I don't want to go back
14 and forth in the depositions. The report for each of the -- for
15 each of the experts lays out the definitions for each of the
16 variables. That's what I'm relying upon.

17 So for either side, if there are these moments in a
18 deposition where someone -- an expert says one thing or another,
19 that to me is less significant than, Mr. Isaacson, what the
20 actual reports show. If you're saying that in fact -- and
21 Dr. Topel will say that in fact if you eliminate this time
22 period, that that completely eliminates the statistical
23 significance of the impact of the foreclosure share, fine. Then
24 that's what you can do, but I don't -- I don't find it helpful
25 to pull out portions of deposition testimony that may or may not

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1 be sort of explained in the reports themselves.

2 MR. ISAACSON: So not everything is said in a report,
3 but I also think what I'm saying is completely consistent with
4 the report. He listed and he said, I believe, that it's
5 30-month in champion clauses. That's how he measured the
6 contract.

7 BY MR. ISAACSON:

8 Q. Did I miss something?

9 A. You missed one other element. It was 30-month champion
10 clause and, perhaps, a right to match. I'm just -- I'm getting
11 tired, but there's one other -- there's one other element. I
12 had a slide earlier in the day that showed three elements of a
13 contract that are necessary for us to deem it to be potentially
14 exclusionary.

15 Q. When you count the 30 months, you include the right to
16 match?

17 A. Oh, correct. I'm sorry. I just am having a hard time
18 remembering what the third element was, but --

19 Q. Right.

20 MR. ISAACSON: I didn't think I was saying anything
21 controversial, Your Honor.

22 THE COURT: Well, what I'm saying to you, Mr. Isaacson,
23 I'm not saying that you are. What I'm saying is that it's
24 helpful for me because when I go back and look at the testimony,
25 I'm going to match it to the reports. And to the extent that

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1 you're saying that this is a major impact of the report, the
2 reports for both of the experts define the variables. And so if
3 you want to say this is a significant or predictive aspect to
4 this particular variable, that's fine. Then I think it's
5 helpful to point that out or ask him about that in the context
6 of the report. If that's what you're trying to do here, that's
7 fine.

8 But I always want to make sure that whatever the
9 testimony is, it's matched up to aspects of the reports and the
10 sort -- and the models that are used so that I can go back and
11 tie it to that particular modelling. Because obviously this is
12 very complex modelling, and I don't want to take statements out
13 of context from either expert as it relates to the modelling.
14 That's why I've tried to emphasize to both parties focusing on
15 the reports because I think since none of us are the
16 econometricians that these experts are that's the best way for
17 us to stay focussed.

18 BY MR. ISAACSON:

19 Q. All right. Well, let me try this. Is it fair that in the
20 absence of the 30-month contracts you don't have an opinion
21 about whether any of the acquisitions that you've talked about
22 were anticompetitive?

23 A. So now you're going into a different topic which relates to
24 the answer that was on the deposition screen. That question
25 that was put to me was of the three pieces of the challenged

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1 conduct: the acquisitions, the long-term exclusive contracts
2 and I think exclusivity was the third element, Your Honor, and
3 the -- and the third would be the coercion. I was asked in the
4 deposition which one of those three are necessary to drive
5 foreclosure. And my answer was the 30-month plus exclusive
6 contracts.

7 But I think that the confusion was created when you
8 asked me whether those --

9 Q. I didn't.

10 THE COURT: Hold on. Let him finish.

11 MR. ISAACSON: I'm sorry. I was asking a different
12 question, so ...

13 THE WITNESS: Well, we were talk --

14 THE COURT: Go ahead. Finish.

15 THE WITNESS: We were talking before, Your Honor, about
16 three elements of a contract that I needed to find before I
17 deemed it potentially exclusionary.

18 THE COURT: Right.

19 THE WITNESS: And then he showed something on -- that
20 was I think taken out of context. It was in relation to a
21 different question which is, of the three elements of the
22 challenged conduct: acquisitions, long-term exclusive
23 contracts, and coercion, which one of those do I consider to be
24 necessary to drive the model and gender and drive foreclosure.
25 And that one I will grant you the only one that's necessary of

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1 those three are the long-term exclusive contracts.

2 THE COURT: Okay.

3 BY MR. ISAACSON:

4 Q. And you don't have an opinion if in the absence of the
5 30-month contracts whether the acquisitions are anticompetitive?

6 A. I can tell you that if the -- if the anti -- if the
7 long-term exclusive contracts were to go away, if the judge were
8 to rule that those were procompetitive, right, then there would
9 be no damages. I -- my model turns on those --

10 THE COURT: The ability to lock up the fighters.

11 THE WITNESS: The ability to -- if you take those away,
12 then there are no damages. Alternatively, because they're
13 necessary, what goes on elsewhere is not that important. The
14 other ones are not necessary. So if you were to rule, for
15 example, that the acquisitions are procompetitive, right, then
16 they stick around. In the but-for world they would have no
17 bearing on my model. I would come to the exact same place --

18 THE COURT: The acquisitions including the acquisition
19 of the fighters? Then that would be different, right?

20 To emphasize your point, in other words, if I said,
21 well, the acquisitions are procompetitive and that includes the
22 acquisition of the additional fighters, that could potentially,
23 I'm not saying that it would, could potentially impact your
24 results?

25 THE WITNESS: I'd have to think about that one. Up

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1 until now I've been thinking about three elements of the conduct
2 where the exclusive long-term contracts were a separate discrete
3 element from the acquisitions.

4 THE COURT: Right. Okay.

5 BY MR. ISAACSON:

6 Q. So we talked about the time trend variable. You also
7 mentioned a year fixed effect. That was in the -- the footnotes
8 or whatever, the part of your -- of that table we were looking
9 at. And those control for the possibility of things that have
10 changed from year to year?

11 A. I think the way that I would put it is that if something
12 special happened in a given way that may have altered the wage
13 share, then the year fixed effects would capture it.

14 Q. Right. So the result of that is that when you're measuring
15 the relationship between foreclosure share and fighter share,
16 you're doing that within a year and not across years?

17 A. (Pause.)

18 I wouldn't put it that way. What's informing the
19 foreclosure variable in my model is time series variation at
20 Zuffa across time that relates how changes in the foreclosure
21 share across time affect -- affect wage share.

22 Q. Right. But your year effects variable, possibly in
23 combination with the trend variable, is taking out changes in
24 the foreclosure share across years; you're looking at the
25 relationship between foreclosure share and fighter share within

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1 years?

2 **A.** I wouldn't put it that way.

3 **Q.** Okay. Do you have an explanation, once you've wiped out the
4 year effects, what's left besides within the year?

5 **A.** I haven't wiped out anything. I'm just controlling for the
6 possibility that something happened in a given year that we
7 can't observe that may have explained a change in the wage
8 share. I'm isolating the effect of changes in foreclosure share
9 on the wage share.

10 **Q.** So once -- let me use your language. Once you control for
11 year effects across years, what's left other than to look at
12 relationships within years?

13 **A.** I just wouldn't put it that way. I'm taking advantage of
14 time series variation across years to inform the foreclosure
15 share variable.

16 **Q.** All right. I'm giving you the opportunity to answer this.
17 Once you control for the effects across years, what else are you
18 looking at when you're looking at a relationship such as
19 foreclosure share to wage share, other than what that
20 relationship looks like within years?

21 **A.** I just wouldn't put it that way. We're not constraining
22 variations within years to --

23 THE COURT: But the variable -- so the variable
24 isn't -- whatever the variable time span is, I don't know --
25 that's why I had asked the earlier question about is it matched

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1 up with years.

2 MR. ISAACSON: It's not.

3 THE COURT: It's not. So that's why I'm asking you --
4 I'm just curious about your question. It would be whatever is
5 captured within that time frame that's impacting the wage share
6 is what's captured, as I understand it, by that time variable,
7 right? And I'm not sure what -- what your point is because I
8 think that's what he said.

9 MR. ISAACSON: So when you're looking at ...

10 So within a year, in terms of events, you have -- you
11 have different types of events. You have very large events,
12 such as a Pay-Per-View event that's widely publicized. You
13 might have a smaller event. And if you look at just the
14 relationship between foreclosure share and wage share within a
15 year, you're doing comparisons of those types of events.

16 THE COURT: Unless there's another variable that
17 controls for them in the model, right?

18 MR. ISAACSON: I don't think he's suggesting -- there
19 is no wage --

20 THE COURT: But they're listed. So if they're listed
21 there, I would assume that they're also controlled for within
22 that same time period, wouldn't they be, Dr. Singer?

23 THE WITNESS: I'm telling you that the foreclosure
24 share is being informed by the variation in the time series
25 across the entirety of the study period; not just within a given

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1 year.

2 THE COURT: But it would also exclude that particular
3 variable -- consideration of other variables that are also in
4 the model that you are controlling for. So, in other words, you
5 have a -- unless there's some sort of interaction, you have a
6 Pay-Per-View --

7 THE WITNESS: Exactly. I'm sorry. I'm not interacting
8 the years -- the year fixed effects with the foreclosure
9 effects, for example. I don't know if that's where you're
10 going, but I didn't do that.

11 BY MR. ISAACSON:

12 Q. No, I'm talking about if you just look -- if you just take a
13 year, as to what happened within a year, and you look at the
14 relationship between foreclosure share and wage share, you're
15 going to be looking at widely -- potentially looking at widely
16 different events with many different sizes of revenues?

17 A. You could be looking at widely different -- I thought you
18 were going to say wage shares, but you could be looking at
19 widely different event revenues. But the problem is that if you
20 limit it to one year, you're not going to get much variation in
21 the foreclosure share. Foreclosure share doesn't vary that much
22 within a year.

23 Q. All right. The -- so let's look at your ... their slide 66.

24 THE COURT: And, Mr. Isaacson, we have about five or so
25 more minutes and then we're going to have to wrap it up. And,

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1 again, we'll then talk about how we go forward with our
2 scheduling, because obviously we're running a little bit behind
3 as relates to the scheduling in terms of the testimony.

4 So we need to allow for a little bit more time given
5 how long it's taken so far. So it's up to you, but I'll give
6 you time obviously to be able to come back and finish up.

7 MR. ISAACSON: The one thing I know, Your Honor, is
8 it's up to you. The --

9 THE COURT: Well, I'm not sure that --

10 MR. ISAACSON: I know --

11 THE COURT: And I want to at least tell you this. I
12 appreciate the challenges of trying to do cross-examination in
13 the context of an impact regression model for variables which
14 you yourself may not completely and fully understand in the
15 context of background in econometrics. So I don't want you to
16 think that I'm asking for you to have a level of precision,
17 Mr. Isaacson, that you couldn't have in terms of training. And
18 I appreciate the attempts to try to simplify it, but I do think
19 I want to over -- avoid oversimplification in a way that doesn't
20 represent the modelling for both -- for both experts.

21 That being said, what that means is that I want to be
22 able to give the lawyers, particularly the lawyers who are going
23 to be effectively crossing the experts, the ability to try to
24 come at these things in different ways. And that's why I'm
25 saying to you I'll build in some latitude for you tomorrow. And

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1 we may have to talk about sort of our schedule and where we go
2 forward. But I do appreciate the fact that it's a challenging
3 endeavor in this context.

4 MR. ISAACSON: Let me just -- let me just see if I can
5 ask less than five minutes some -- a brief question that will
6 help me understand something for tomorrow.

7 THE COURT: Okay. Sure.

8 BY MR. ISAACSON:

9 Q. So on slide 66, this was your -- your slide, it shows a 30
10 percent foreclosure share and then that ties to a 47.3 percent
11 but-for wage share?

12 A. Correct. It's a visual demonstration of what's going on in
13 a much more sophisticated way via the regression model.

14 Q. Right. And the -- if you look at --

15 MR. ISAACSON: Now, can we show the slide 57.

16 BY MR. ISAACSON:

17 Q. This is your slide 57 from your presentation. And you can
18 see back in 2007 there's a foreclosure share of about 20
19 percent, and then for several -- it goes up to 30 percent, and
20 it bops around 30 percent for several years. Do you see that?

21 A. Yes.

22 Q. So you would have predicted that during that period that
23 wage share would -- fighter share would rise to 47 percent?

24 A. No.

25 Q. In your but-for world?

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1 **A.** No.

2 **Q.** Okay. And why -- and so why is that?

3 **A.** So think about what's happening. In these years, which by
4 the way predate the class period, but I imagine we're just doing
5 this for an academic exercise. So pick 2008, for example, which
6 is the year I'm not projecting damages for. I would take the
7 actual compensation that occurred for a fighter, and then I
8 would go try to predict his or her but-for compensation setting
9 the foreclosure share, say, to 30. But given the fact that it's
10 already almost at 30, I would suspect -- I never did this, but I
11 would suspect that had I tried to predict an impact in 2008 --

12 THE COURT: You would have found nothing.

13 THE WITNESS: Nothing or a much smaller portion of the
14 class would have been injured.

15 MR. ISAACSON: Okay. That will help me -- that will
16 help me going into tomorrow.

17 THE COURT: Okay. All right. So you can step down,
18 Dr. Singer, but you will be back tomorrow.

19 So let's talk a little bit about, Mr. Isaacson and
20 Mr. Cramer, the scheduling because we're obviously taking a
21 little bit of time here to go through this. But, Mr. Isaacson,
22 how much time do you expect you would have for Dr. Singer
23 tomorrow?

24 MR. ISAACSON: I had -- so we have a 6.5 hour budget.
25 I had originally budgeted around 3, and I guess I've used

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1 approximately one. Somebody will tell me ...

2 MR. CRAMER: Yeah.

3 THE COURT: So maybe an hour and a half or so, Mr. --

4 MR. ISAACSON: You know, my --

5 THE COURT: -- Isaacson.

6 MR. ISAACSON: Since this is a dialogue with the Court
7 and I don't know what he's going to say, I have no idea how
8 efficient I'm going to be. I will try and get to the material
9 that the Court wants to hear about tomorrow.

10 THE COURT: Well, I think part of the issue is it may
11 also be helpful -- and I actually don't know if Dr. Topel is
12 here. I assume that --

13 MR. ISAACSON: He is.

14 THE COURT: -- he is. It may also be helpful for me to
15 hear from them both, and then on rebuttal we may have a more
16 robust conversation about the differences. Because I think
17 what's happening is and it's going to happen with Mr. Cramer
18 when Dr. Topel testifies is you all are going to point out
19 things that the experts are actually better at pointing out with
20 respect to each other models. And then you'll come back and
21 circle back and I'll be able to look at that.

22 And so I can appreciate, Mr. Isaacson, you trying to
23 did that ahead of your expert, and that's challenging. It may
24 be more useful to reserve a little bit more time or have a
25 little more time on rebuttal for both sides so that once there's

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1 been at least some explanation, further explanation, of the
2 differences by the experts themselves, then I can ask some
3 questions. You all can follow-up, and we can sort of move from
4 there.

5 MR. ISAACSON: Quite -- quite sincerely, Your Honor,
6 I've been trying, I mean, not to impeach the man, but to lay the
7 foundation so that if Dr. Topel says Dr. Singer said something,
8 we're getting that right.

9 THE COURT: Right.

10 MR. ISAACSON: And ...

11 THE COURT: Well, look, you're certainly free to and I
12 think you've done it in your briefings to argue that they have
13 mischaracterized each other's arguments. And that's going to be
14 a part of what I have to disentangle, and that's okay. They can
15 make those -- they can make those statements as long as they're
16 referencing portions of the report in the record as each of them
17 have done and will do, then I will be able to be to make that
18 type of determination.

19 So I don't know that, Mr. Isaacson, you need to spend
20 as much time sort of laying the foundation for how you are going
21 to be pointing out discrepancies. The reports speak for
22 themselves. And the respective experts can testify as to how
23 their reports and the modelling may or may not make assumptions
24 that are appropriate or may not take certain factors into
25 consideration.

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1 MR. ISAACSON: I think I actually got through my
2 foundational stuff today.

3 THE COURT: Okay.

4 MR. ISAACSON: And as you can tell, that's the hardest
5 stuff. And -- but I appreciated the opportunity for us to have
6 these discussions of these individual variables because I
7 thought they needed to be explained to the Court.

8 THE COURT: No, look, I think that they do need to be
9 explained to the extent that there's any issues that I need to
10 consider regarding, for example, your arguments with respect to
11 what's not captured by the foreclosure share and the wage share.
12 Those are relevant conversations.

13 So then let's talk about sort of tomorrow. So tomorrow
14 we have Dr. Singer for an hour and a half. And then,
15 Mr. Cramer, how much do you have for follow-up? And is
16 Dr. Singer then going to come on after Dr. Topel?

17 MR. CRAMER: Yes, there's a rebuttal.

18 THE COURT: Okay. So I don't know how much time you
19 need then, Mr. Cramer, tomorrow to have Dr. Topel -- excuse
20 me -- Dr. Singer come back. It would be better for us to let
21 Mr. Isaacson finish his cross. Then Dr. Topel comes on. You
22 all both do your respective questioning. Then we can bring back
23 Dr. Singer because I don't know that it's going to be helpful
24 just to have you go through a rebuttal after Mr. Isaacson's
25 cross tomorrow of Dr. Singer without first having Dr. Topel

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1 testify.

2 MR. CRAMER: The only thing I would say, Your Honor, is
3 there's a couple of things that came up so far that I would want
4 Dr. Singer to clarify. That might take five or 10 minutes, if I
5 can just get five.

6 THE COURT: If they're that small, we can clarify them
7 even afterwards for the record. I don't know that --

8 MR. CRAMER: I think it would be helpful before
9 Dr. Topel testifies to have Dr. Singer explain one or two things
10 for five minutes. So if Your Honor would indulge me, I would
11 ask for that.

12 THE COURT: Well, let me think about that. It depends
13 upon how we're going tomorrow. So after -- so we have
14 Dr. Singer tomorrow for at most an hour and a half, hour and 45
15 minutes. And then we have Dr. Topel after that which we should
16 finish then potentially tomorrow, at the latest Wednesday
17 morning, correct?

18 MR. CRAMER: Oh, correct.

19 MR. ISAACSON: Yeah.

20 THE COURT: And then we have nothing else after that,
21 right?

22 MR. ISAACSON: Until Friday.

23 THE COURT: No, I mean, as relates to those two
24 witnesses.

25 MR. ISAACSON: Yes.

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1 THE COURT: Well, I'm sorry. Then you're going to
2 bring Dr. -- are you going to Dr. -- are you going to bring
3 Dr. Singer back on Wednesday morning for rebuttal?

4 MR. CRAMER: If the rebuttal extends to Wednesday
5 morning, Dr. Singer will be back Wednesday morning. And then we
6 have nothing on Thursday.

7 THE COURT: Thursday.

8 MR. CRAMER: And then on Friday we would have Professor
9 Zimbalist and Blair.

10 THE COURT: Got it. Okay. So then actually I think
11 we're actually doing fairly well as it relates to the scheduling
12 that you all set forth.

13 MR. CRAMER: I think so.

14 MR. ISAACSON: Yeah, we'll finish on Wednesday.

15 THE COURT: So is there anything else we need to then
16 do or clarify? But we will get started tomorrow at 9 rather
17 than 9:30. That will build in a little bit of extra time.

18 MR. CRAMER: Excellent.

19 THE COURT: All right. Anything else we need to do
20 today then? Okay. All right. We'll be adjourned. I'm going
21 to stay on the bench for a few moments.

22 (Whereupon the proceedings concluded at 4:10 p.m.)

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COURT REPORTER'S CERTIFICATE

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4 I, PATRICIA L. GANCI, Official Court Reporter, United
5 States District Court, District of Nevada, Las Vegas, Nevada,
6 certify that the foregoing is a correct transcript from the
7 record of proceedings in the above-entitled matter.

8

9 Date: August 26, 2019.

10

/s/ Patricia L. Ganci

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Patricia L. Ganci, RMR, CRR

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